Traffic Engineering

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Membership information may be obtained by writing to the Executive Secretary, Institute of Traffic Engineers, 212 Strathcona Hall, New Haven 11, Connecticut.

Traffic Engineering is that phase of engineering which deals with the planning and geometric design of streets, highways, and abutting lands, and with traffic operation thereon, as their use is related to the safe, convenient, and economic transportation of persons and goods.

May We Offer . . .

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LETTERS TO THE EDITOR

. . . . Allow me to congratulate you on your new job! It is a big responsibility but I am sure you are capable of handling it. Good luck!

Herbert A. Keegan

Newark, N. J.

——o——

It is very gratifying for me to know that the Board of Direction of the Institute of Traffic Engineers has placed "Traffic Engineering" magazine under your immediate control. Best wishes for success in this undertaking.

Dean A. A. Potter

Purdue University,
Lafayette, Indiana

——o——

I was more than pleased to hear that you had taken over editorship of "Traffic Engineering" magazine with the April issue. You are located in the center of things in New Haven and there is no question but what you can do a fine job with this excellent publication. . . .

Bernard C. Hartung

Reno, Nevada

——o——

You have my best wishes for success as the new editor of "Traffic Engineering" magazine. That goes for Miss Lincoln, too. It appears to me that you might consider a change in "make-up" in the magazine which would give more biographical data for authors. I believe this would be interesting and helpful to most of your readers.

J. Anthony Carrothers

New York City

We are following Mr. Carrothers' excellent suggestion concerning additional data on author's.—ED.

In response to the request in my letter of December 20, 1948, I thank you very much for the little notice which you kindly published on page 244 of the February issue of TRAFFIC ENGINEERING and you will be interested to know that I have received from W. Graham Cole the July, August and October issues for 1933, also the one for August, 1934. This leaves missing the following:

Vol. 1, 1933; May, June, Nov., Nos. 1, 2, 7
1934, April, No. 12
Vol. 5, 1934; July, Sept., Oct., Nov.,
Nos. 2, 4, 5, 6
Vol. 7, 1936; June, No. 2
Vol. 8, 1937; Sept., No. 5

I was bold enough to ask you to help me locate these numbers for the Transportation Library at the University so that we could bind them all at this time. The library has already been designated as a sort of semi-official depository for various institute documents. For instance, we have the scripts of all of the "Resolutions Committee" reports from the beginning up to and including 1947 and I am still hopeful that we may be able to locate the numbers of TRAFFIC ENGINEERING which are still missing.

I hope that the little item in the February TRAFFIC ENGINEERING stated that I was anxious to complete "my library" of old issues but I trust that those reading it all realize that it was the Transportation Library of the University rather than my personal library, which I was trying to complete.

Thank you for your kindness.

Roger L. Morrison

Professor of Highway Engineering
and Highway Transport
University of Michigan, Ann Arbor, Michigan

We hope other readers will follow the example set by Graham Cole and complete Professor Morrison's library of "TE" magazine—ED.

Don't forget to order your copy of ANNUAL PROCEEDINGS of the INSTITUTE OF TRAFFIC ENGINEERS priced at $2.00 per copy.

Send your order direct to ITE Headquarters, Strathcona Hall, New Haven 11, Connecticut.

I have been appointed Chief Traffic Engineer of the young State of Israel. I am working with the Controller of Road Transport, the Department of Ministry of Communications dealing with all matters related to road traffic and transportation. My tasks are extensive: I am advising our Ministry and others on questions of general policy, drafting the new Transport and Traffic Law. The system of transport and traffic taxation is being developed along lines suggested by me. I am representing our Department with the Town and Country Planning Section and the Highway Administration of the Ministry of Labour and Building. A special ordinance will shortly establish a "Central Road Sign Authority", and I shall be the key man thereof. Police matters regarding traffic and transportation are being dealt with by me and I am lecturing in the training courses for traffic cops, both civil and military police. It may interest you that we are putting some girls into traffic police work; I got the impression during the training courses that they are alert and eager to learn.

In the field of road transportation I am dealing with all questions of mass transportation (transit systems) such as lay-out of routes, tariffs, statistics, etc.; with the organization of taxicab services, with problems of organization and fares in goods transportation.

The work of traffic engineering is to some extent hampered by war conditions under which we still live. With the return of normal conditions I shall start with a traffic census, etc.

A great deal of my time is devoted to road safety problems. I am adviser to the newly established Road Safety Council with our Department and to its numerous committees, and I have a fixed column in the radio.

Thus, I may say that I expect to have a decisive task in building up Israel's road traffic and transportation and you will understand that I am quite proud of this task, being the first and only traffic engineer in the Holy Land.

As soon as conditions allow, I hope to make my long coveted visit to the United States. You will understand how much I shall like to do it.

W. A. Fraenkel
70 Hayarkon St., Tel-Aviv, Israel

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Meet Your New Managing Editor

Realizing that human beings are usually interested in "behind-the-scenes" activities of organizations, publications, et cetera, we would like to present to our readers a brief resumé of your new Managing Editor.

Ann Lincoln was raised in Taunton, Massachusetts, with five brothers. She completed a four-year academic course at Taunton High School and was educated at Salem College in Winston-Salem, N. C., and Larson College in New Haven, Connecticut.

Upon completion of her college work, she returned to her native state and obtained a position at Reed & Barton Company in Taunton. After three years with this company she moved to New Haven and assumed the duties as Assistant Secretary of the *Institute of Traffic Engineers*. She has been with the Institute for a period of five years.

Miss Lincoln's duties as Managing Editor will consist of responsibility for format, style, promotion, and business management of "TRAFFIC ENGINEERING" magazine. She has a thorough knowledge of Institute affairs and a broad concept of traffic engineering, which well qualifies her for this very important assignment. In addition, her extensive training in journalism will assure efficient and capable management of the magazine.

We hope you will all like the first edition prepared by your new Managing Editor. She states that constructive comments from members and subscribers will be most welcome.

With your support and interest, we hope that our magazine will truly be something of which we can all be proud.

The Editor

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*TMR-MMCO

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Opportunities In Traffic Engineering

by LESLIE WILLIAMS *(Mem. ITE)**

Ed. Note: This paper was presented before the Tenth Annual Students' Chapter Conference of A.S.C.E.

Opportunities in traffic engineering are excellent—particularly for today's civil engineering students.

You were born and tutored amidst the throes of the "automotive revolution"; and you are about to enter a work-day world characterized chiefly by man's new-found mobility. Life today is much more fluid than in your father's time; but in your hands, as future practicing engineers, will lie largely the task of determining whether the environment of tomorrow will be a safe, prosperous and convenient one in which to live, work and raise a family or an Autopic nightmare of daily traffic conflicts and congestion.

For the first 25 years of this century engineering for highway traffic consisted largely of getting cars out of the mud, laying down hard road surfaces and building farm-to-market roads to open up new found territory. It was the great roadbuilding or "good roads era". Over these ribbons of hard-surfaced roads came rolling on pneumatic tires in the early 20's millions of motor vehicles. This has been both a curse and a blessing. Traffic accidents and congestion rose frightfully until now the annual economic losses from accidents and congestion rise above the 4 *billion* dollar mark. Fortunately the economic gains brought by this great expansion of automotive production and travel have greatly outweighed the losses from accidents and congestion and our country has prospered greatly.

The past 25 years in engineering for highway traffic have been noted for traffic surveys and the initiation of the triple "E" traffic program of Enforcement, Engineering and Education. Traffic regulations and resolutions multiplied like rabbits, and traffic control devices sprang up out of the earth like dragon's teeth. Out of this cauldron has come Model Ordinances, a Manual on Uniform Traffic Control Devices, a Handbook on Traffic Engineering and other aids in promoting the safe and expeditious movement of the 35,000,000-odd passenger cars now operating over our 3,300,000 miles of streets and highways, which are unsuited and incapable of even meeting the automotive requirements of today much less the demands of 25 years hence.

Long Range Program

We have a potential market in this country for 60,000,000 motor vehicles —passenger cars, trucks and buses— but we can achieve this goal and move these vehicles with speed and safety only by investing an average of approximately $3,000,000,000 a year for the next quarter of a century according to national authorities who have analyzed our highway needs.

A simple and reasonable allocation of these funds would approximate:

One-third on a National Network of Interstate Highways connecting the major urban areas of this country and including their cross-city connections.

*Traffic and City Planning Consultant New York City

1824 EAST SECOND STREET • WICHITA, KANSAS

One-third on existing rural highways to raise their operating standards to provide the maximum of traffic safety and convenience

One-third on existing urban arteries as part of comprehensive Master Plans for reconverting our cities to meet the requirements of fluid living in the future.

This is the long-range job in which traffic engineers will play a leading role. But the immediate need is to get greater safety and maximum capacity out of the traffic facilities we have through minor street changes, one-way movement, more off-street parking, better signs, signals, roadway markings, street lighting and other traffic engineering control measures.

We have a tremendous traffic problem confronting us. We have much of the "know-how" and many of the tools and techniques to do the job. More will soon be provided. Right now there is in the process of preparation at Yale University the first textbook on Traffic Engineering which will accelerate the training of traffic engineers in colleges throughout the nation.

Funds will be forthcoming to perform this gigantic task simply because any decrease in the present rate of increase of automotive production and travel levels in the next decade would shake the economic foundations of our country and consequently threaten our American way of life. For example, the people themselves are demanding that a stop be put to the diversion of highway taxes to other uses by our State legislators and constitutional amendments are being passed to this effect.

Personnel Needs

To do the traffic job that has to be done in the next 25 years and to do it efficiently and economically will require at least three times as many traffic engineers as there are engaged in this work today, according to leading traffic authorities.

The Institute of Traffic Engineers has only 453 active members at present. Approximately 65 per cent of these are registered professional engineers and 85 per cent are graduate engineers, largely in civil engineering. There are probably 300 additional persons performing traffic engineering work at a professional or subprofessional level—making a total of approximately 750 persons actively engaged in traffic engineering work at present.

Our Federal and State Highway agencies are undermanned at present. Every community of 50,000 population and up needs one or more traffic engineers engaged at the professional and subprofessional level. Add to these the traffic engineering services needed by Public Utility Commissions, Mass Transportation and Trucking Companies, Insurance Companies, Automobile Clubs, Associations, Manufacturers and other groups concerned with motor vehicles and roadbuilding. Then add to these the need for traffic engineering services in related governmental agencies such as City Planning Departments, Public Works Departments, Park Authorities, etc., and one can readily see the tremendous need and potential demand there will be for trained and experienced traffic engineers.

The most serious need today is for junior grade traffic engineers who are willing to learn and start in the field at a reasonable salary. The speed with which trained men are provided will depend largely upon the pressure exerted by citizens groups demanding that proper administrative mechanism be devised for unifying the work of all official traffic agencies operating in a given area and that Traffic Engineering Departments be established to do the work, staffed with trained *traffic* engineers.

Future Outlook Promising

Although the future of traffic engineering is bright and a cordial hand of welcome will be extended to newcomers by those of us on the job; nevertheless, I would caution some reflection before dashing headlong into this field at the first opportunity or opening. Let us look for a moment into the following important factors influencing your decision:

Remuneration: The pay for professional and subprofessional work in traffic engineering is, in my opinion, not as yet commensurate with the importance of the work or service rendered. The recent proposal in New York City to set up a Traffic Engineering Department headed by a "traffic engineer" at a salary of only $10,000 is ample proof of the lack of understanding of the tremendous economic implications of the traffic problem and the vital part that traffic engineering must play in its solution. There are, however, bright spots in other places. Chicago, Houston, Denver, Miami, Cincinnati, Buffalo and many other communities are examples of a growing awareness and recognition of the importance of having top traffic engineering talent on the job. Salary brackets generally range today from $3,600 to $4,500 for Junior Members of the Institute of Traffic Engineers. Associate Members range from $4,500 to $6,000 and Full Members are paid $6,000 and up.

Talent: A specialized knowledge of the human and traffic, as well as the physical engineering, factors is required to successfully solve a traffic engineering problem. A Traffic Engineer must get inside of the brain of the man behind the wheel

Tact: Discernment, delicate perception and an adroitness in meeting situations generally beyond the call of the ordinary professional engineer is necessary in great abundance to practice successfully in the field of traffic engineering. Traffic engineers must have an ability to sell their programs not only to the public but also to public officials. They must deal directly with the public and know and be able to practice public relations.

A Student Plan of Action

Now assuming that your reflections and your personal investigations among practicing traffic engineers reveal a "green light", then I would suggest to you as students the following steps:

1. Organize within your own university, if there are five students interested in traffic engineering as a profession, a Student Chapter of the Institute of Traffic Engineers as was done at Yale and Illinois.
2. Affiliate yourselves with the local Section of the Institute of Traffic Engineers in your area as the Yale Chapter has done with the New England Section.
3. Urge special instruction in Traffic Engineering in your university as part of your undergraduate Civil Engineering curriculum. Universities now giving undergraduate courses in Traffic Engineering include: Illinois, Michigan, Cornell, Syracuse, Purdue, Iowa State, Oregon State and the University of California.
4. Consider a research thesis in traffic engineering and graduate training in some university as at the Yale Bureau of Highway Traffic and The University of California.
5. Arrange with some selected sponsoring group for a Student Conference in Traffic Engineering in your area.

6. Correspond as a Student Chapter or group with the Institute of Traffic Engineers' headquarters in Strathcona Hall, New Haven, Connecticut, regarding conferences, training and job opportunities.

In closing, I would like to leave with you the words of Professor Kirk Bryan of Harvard University to students inquiring as to the possibilities of good jobs in the field of Geology—"No man holds a job that is worth having unless he makes it himself."—and the same applies to opportunities in Traffic Engineering.

Railroad Crossing Traffic Accidents

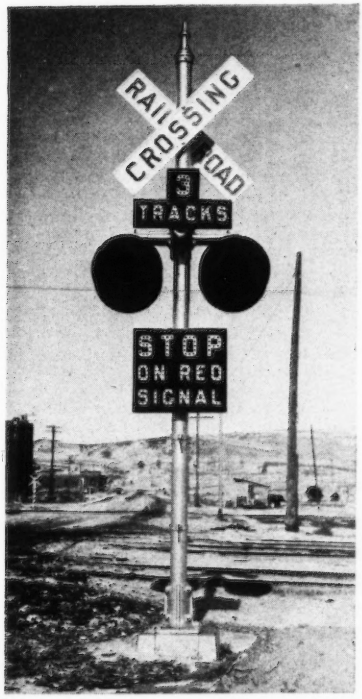
The City Commission of Wichita, Kansas, has adopted an ordinance compelling the driver of any vehicle to stop when a flagman or watchman so signals or when a flashing automatic signal is operating due to the approach of a train to a crossing. The recommendation was made to the city by Traffic Engineer George J. Fisher *(Mem. ITE)*, on the basis of a survey made in cooperation with Sergeant George A. London and Traffic Patrolman Jones of the Wichita Police Department.

The survey, suggested by Mr. George Shepherd, Chief of Police, which was made of all intersections that have grade crossings, revealed that 90 of the 135 traffic accidents at railroad crossings in Wichita from January 1, 1938, up to October 1, 1948, were the direct result of failure to see the train or failure to obey the signal or flagman.

The report states, "Numerous cases revealed the fact that (drivers) saw the wig-wag or flasher, but did not see any train coming, consequently they did not stop. It would appear that if some measures were adopted whereby the train cars themselves were lettered with fluorescent paint or equipped with large red reflectors, which would have a tendency to attract the drivers' attention, might help reduce the number of accidents. Another answer might be the flood lighting of railroad crossings to afford better lighting conditions."

Mr. Fisher's second recommendation to "take steps to illuminate, by the use of sodium vapor luminaires, all of the crossings studied in the physical condition survey and especially all crossings over which more than 1,000 vehicles per day pass", is currently being worked out with the local power company. Mr. Fisher reported recently to TRAFFIC ENGINEERING, " . . . the progress in that respect is gratifying. There will be a total of approximately 60 crossings illuminated with sodium vapor luminaires when the program is completed."

The 92 main railroad crossings chosen for the physical survey were selected with consideration to the volume of traffic on the street and to the general rank of the street in traffic importance. Results show that 58 of the 92 crossings had poor or bad sight distance on either or both approaches. In the past 10 years, 60 of the accidents have occured at those 58 crossings. It was further discovered that 59 of the crossings are in need of repair. The railroads will be advised



Closeup of caution signal at a railroad grade crossing.
—Photo by U. S. Bureau of Public Roads

of these crossings and requested to put them into good shape.

The final recommendation of the Traffic Manager to the City Commission requesting the installation of flashing protective devices by the railroads will shortly be submitted.

The ratio of accidents at railroad crossings controlled by automatic signal, controlled by flagman or watchman, and with no controls is significant. Of the 134 accidents, 39 occurred in spite of automatic signals, 20 occurred in spite of the flagman's or watchman's warning, and 75 occurred where there was no signal.

Ten railroad crossing traffic accidents occurred in Wichita after the survey was made, bringing the total number of accidents to 32 for the year. This figure, far greater than any for the preceeding 10 years, has pointed up the need for and significance of the recommendations which have been made.

It is expected that the three major recommendations submitted to the Wichita City Commission will, when implemented fully, help to cut down accidents at railroad crossings.

Figures for six months just released by the Virginia State Police show that an accident at night is much more apt to be fatal than one in daylight.

Nearly half of the fatal accidents—123 out of 259 happened at night. But of all accidents, only one-thrd — 5,579 out of 15,103—occurred at night.

Failure of motorists to compensate for reduced visibility accounts for the higher night fatality rate, according to The Street and Traffic Safety Lighting Bureau.

New Rochelle, New York recently ended a string of 588 traffic death free days when a 9 year old bicyclist was killed. According to Sgt. Brueckner of the New Rochelle Police Traffic Division, the record was "best ever" for Group IV cities; Schenectady and Mt. Vernon had set records of 441 and 414 respectively. New Rochelle placed third in fatality records of Group IV cities in 1947 as a result of the fatality late in the year.

Designing Highway Illumination

Ed. Note: For several years the Technical Sub-committee of the Highway Lighting Committee of the Pacific Coast Electrical Association has been cooperating with the Traffic Engineers of the California Division of Highways to obtain a uniform method of lighting and an interpretation of the I.E.S. "Recommended Practice of Street and Highway Lighting."

It was found that within the eleven districts throughout the State each engineer had the problem of determining the various factors in obtaining an average foot candle illumination as recommended by the I.E.S. handbook. The average foot candles on the street were equal to the

$$\frac{\text{effective lumens}}{\text{spacing x width of street.}}$$

In obtaining the average foot candles, many different results could be obtained from the different types of luminaires. A very intense illustration could be obtained directly beneath the luminaire with a very low minimum at the extreme ends of the spacing between the luminaires. However, the average foot candles, even under these conditions, would be the same as one with a lesser intensity directly under the luminaire and a higher minimum at the extreme end of the illumination.

Again, there are variables in determining the effective lumens. Different results are obtained from the utilization factor and a slight variation might produce a different spacing. In order to overcome this, a committee was formed and it was decided that isolux curves for the scale of the map, the mounting height, and the type and the luminous intensity would be the simplest method. The following article prepared by the Technical Subcommittee describes this method of designing highway lighting.

—o—

In order to apply the recommendations of the Illuminating Engineering Society to practical problems of highway lighting, more specific information is considered desirable.

The I.E.S. recommends a minimum average illumination on the paved roadway of .3 foot candle for highways and .4 foot candles for intersections, circles, and cloverleaves; with a minimum at any point not to be less than one-fourth of this value. These values are based on pavements having a reflectance value in the order of 20 per cent. For pavements having a reflectance as low as 5 per cent, the I.E.S. recommends that the illumination should be increased 100 per cent.

It is considered by this Committee that it is more practical to design an installation by starting with a specific minimum value at any point and checking the average, which is rather difficult to obtain at intersections, to approximate a value of four times the illumination at the lowest point in the area. With a practical spacing of luminaires close enough to obtain a given minimum, the average usually works out to be ample.

Referring to the I.E.S. data above, when using pavements with a reflectance in the order of 5 per cent, which is sooner or later usually the case, the recommended minimum average becomes .8 at intersections and .6 on straight-aways. It is considered that when straight-aways are important enough to be lighted, they too should have a minimum average of .8 foot candle. One-fourth of this or .2 foot candle should be the minimum intensity at any point of the pavement area. It should be kept in mind that these are all minimum I.E.S. recommendations and that for more important areas with higher traffic densities and higher speeds, higher intensities should be used accordingly up to an average of about 1.5 foot candle with a minimum at any point of .4 foot candle.

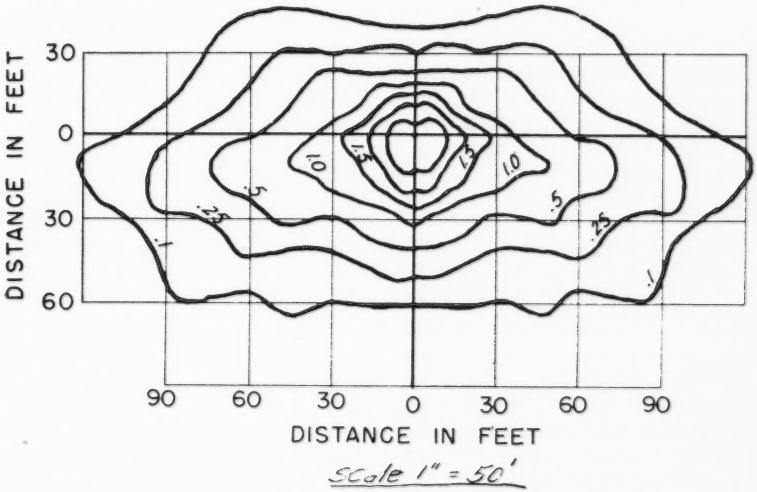
A rough estimate of the spacing and lamp lumens can be obtained by the formula—

$$\text{Spacing} = \frac{\text{Lamp lumens} \times \text{coefficient of utilization}}{\text{average foot candles} \times \text{width of area}}$$

With this approximation obtained, isolux curves of the luminaire selected should be used to determine the minimum at any point.

Where considerable work of this type is done, a simple, quick method of using isolux curves can be adopted. The charts, as furnished by manufacturers of luminaires, are for a specific mounting height with correction factors for other heights. The coordinates are scaled in 1, 2, 3, etc. times the mounting height. The scales can be modified to read directly in feet to correspond to the scale of the highway plan. When this is done, the charts can be applied graphically to the plan and a picture of the light distribution over the pavement obtained. The minimum values are easily checked by this method.

For intersections, especially of the more complex type where the formula for straight sections cannot be used for obtaining an average value of illumination, the isolux chart method can be used to advantage. If locations throughout the area to be lighted (for observation points) are spotted fairly evenly and the summation of foot candles from all of the luminaires is obtained for each spot, an average of the illumination of all the spots will give a practical average of the intersection and the same time the minimum values.



Scale 1" = 50'

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20,000 lumen EH-1 mercury vapor lamp

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A convenient method of using the isolux charts is to make a pair of transparencies. This can be done by making a tracing of the isolux curves, modified to the proper scale, on ordinary tracing paper. This can then be printed by the blueprint process on a transparent film of the cellulose acetate type.

With a pair of these, one superimposed on the other and both beneath a tracing of the pavement plan, the light center locations can be moved about until the desired minimum is obtained. (The value at any point is the total from the two or more light sources at that point.) For complex intersections requiring a building up of illumination from several sources to the required value at any point, the sums of the foot candles from each source should be tabulated for each point of observation. The correction factor for other mounting heights than the one given for the isolux chart should be applied for the final value at each point.

In determining the location of luminaires, distinction should be made between the lower intensity jobs (having an average of below one foot candle) and the higher intensity jobs.

In the lower intensity installations visibility is obtained by silhouetting cars or other objects against the brighter pavement background.

Pavement brightness is obtained by the reflected light from the pavement *toward* the observer's eyes. Light from the luminaire to the pavement beyond the luminaire is largely reflected *away* from the observer and very little brightness is seen. Light to the pavement on the near side of the luminaire produces a brightness pattern wide in lateral dimensions adjacent to the luminaire and tapering in width nearer the observer. The area of the pattern and its brightness is dependent on the candlepower of the light source and reflectance of the pavement.

At intersections it is therefore necessary to locate the luminaire beyond the point of congestion so as to locate the brightness pattern at the desired place. On curves, the brightness patterns will be on the pavement only when the luminaires are located on the outside of the curve. On straight sections of highway the maximum pavement brightness will be obtained when the luminaire is out over the lane or as near to it as is possible.

When traffic congestion is sufficient to block the view of the pavement background, visibility is obtained by reflection of light from the surface of the obstruction itself and considerably more light is required than by the silhouette method.

Here it is more important to obtain a uniformity of foot candles over the area than to arrange pavement brightness patterns at strategic points by luminaire positions.

In these higher intensity jobs the ratio of 1 to 4 between the minimum and average should be maintained but location of luminaires is not so important since there will be sufficient brightness on object surfaces if the foot candle level is maintained regardless of direction of the light.

St. Paul, in common with other cities, is making a study of motor vehicle traffic with especial reference to parking and safe driving. The City Planning Board, through its various committees, is carrying on traffic counts, analyzing accident reports, and gathering statistics and information from other cities as a basis for its findings and recommendations.

Responsibility for Traffic Activities

by WILBUR S. SMITH *(Mem. ITE)**

CONTRARY to general belief, the responsibility for accidents and traffic difficulties on streets and highways goes far beyond the duty and ability of individual drivers and pedestrians. The public, the individuals comprising the body corporate, must have the support and assistance of public officials if the job of highway safety and traffic operations is to be put at the proper level. A cure will never come solely from pointing a finger of guilt at the automobile driver.

The road user, the driver and pedestrian cannot take all the blame for traffic accidents and congestion. It is apparent that the education of the public through propaganda which undertakes to ascribe failure or error in regulation to the individual, his misfeasance or malfeasance, and which seeks to fix upon him alone responsibility for consequences of regulatory defection, is neither justifiable nor tolerable. Certainly the individual, the human element, the "ornery and careless human beings" will always be an important factor in the operation of motor vehicles, and often the principal cause of troubles resulting therefrom, but it is unfair and an evasion of fundamental duties to point the finger of guilt principally at the "individual" because of his errors in street use. The responsibility for correcting problems of accident and congestion is a double-barrelled one; public officials must assume at least an equal share with motorists and pedestrians. Citizens must, then, (a) do their part as road users, and (b) insist that those elected to public office do their part to provide proven correctives. The public must be interested in traffic conditions and then vigorously demonstrate its interest.

"Lack of Interest"

The tragedy of the highway is traceable to the failure of all citizens to interest themselves in the procedure by which their officials sustain the responsibility imposed upon them to provide safety and supervision. Already recognized by some, it must be recognized by all state and local officials that they have a major responsibility for the improvement of traffic accident and congestion conditions, and that they must provide for these problems expert attention, just the same as in all other branches of public safety. Key officials are so busy with so many different things that they often don't see the traffic problem in its entirety and, therefore, do not recognize the gigantic and complicated task of correction, which calls for extensive organization and professional staffing. Many still think that a few policemen, a magistrate, and a sign putter-upper, coupled with some regulations on the statute books fill all needs.

Circumstances attending a number of accidents established beyond reasonable doubt delinquency upon the part of governmental authority in failing to provide, through pronouncement, legislative acts or administrative

***Associate Director, Bureau of Highway Traffic, Yale University, New Haven Conn.**

restraint, mechanical and physical installation, and enforcement, adequate protection to vehicles or pedestrians which might, and in some instances would, have averted catastrophe. There are many examples to illustrate failures.

"Legal" Cow

The overturning and burning of a bus which killed a score of persons resulted from collision with a cow straying (legally) upon the highway. The menace of roving cattle to highway users was advertised by posting official signs; no legislation was provided to remove the hazard.

Nine deaths resulted in a city in one year from auto collisions with concrete signal pedestals in the center of street intersections. The Mayor's comment, "All the drivers were drinking and the quicker we kill off that class of driver the better for the others."

Twenty-nine serious accidents, resulting in several deaths, occurred in a brief period of time on a short section of roadway. All were attributed to "skidding" due to slick tires. Yet, the same drivers, using the same tires had no accidents of similar type on adjacent sections of the same road.

Previous efforts to establish competent supervision of movement have frequently avoided any attempt to have governmental agencies provide what may be considered a reasonably safe and adequately systematized sphere of operations within which the public use of the highway may be comprehended. There has seldom been any effort exerted to discredit or condemn the generally prevalent procedure of assuming that governmental dereliction, predicated upon a false theoretical economy or political expediency, can relieve its perpetrators from liability by imputing defection to the individual citizen, regardless of the lack of merit, warrant or practicability of the supervision imposed upon him.

The more spectacular the accident, the greater seem to be the odds that something will be done by government officials about preventing others of similar type. Railroad grade crossing accidents are generally more spectacular than auto collisions, and by-and-large more has been done to prevent them. Just because most types of auto accidents have become so commonplace as not to be spectacular, many public officials give them little attention.

Safety for Experts

How does traffic safety compare with other public safety activities? All buildings are subject to rigid construction codes and to careful inspection. Except in extreme cases of unlawfulness, no public official would risk violating these building codes. What's more, the enforcement of the codes is usually left to technicians or experts.

Fire prevention is pursued continuously and, in most instances, vigorously in every city. Negligence in the matter is punishable to extreme degrees when brought to light through catastrophe.

Public health measures are carried on relentlessly to rid communities of disease. Epidemics and plagues have been brought under control through such efforts. Public water supply, sewers, vaccinations, garbage disposal, food inspection and many other health measures now are provided in a matter of fact manner. Many inspections occur routinely by persons who have shown themselves qualified by meeting standards prescribed by official agencies, based on nationwide experience.

In almost every type of public safety, or public protection, except traffic, action follows immediately when neglect of duty is evidenced by the loss of life or the dissipation of resources. Let a few major crimes go unsolved and someone is usually fired.

Uncover a large vice ring in any American city and the "heat" is turned on immediately. A fire taking lives or resulting in injuries is always carefully investigated and punishment meted out in accord with negligence found. Local governments have been held financialy liable for derelection or delinquency in such cases and officials proven derelict in the performance of their duty have been held criminally liable.

In practicaly all public safety activities, except traffic, the possibility of governmental agencies ignoring the general welfare is rare.

A single accident or mishap, except again in traffic, may bring about numerous and detailed investigations which may result in major changes in laws, codes and policies. For example, the crash of a single plane in a city can result in new aviation regulations, proximity warning devices, and in revision of building and fire protection requirements in all cities. It was a spectacular and terrible accident whch is greatly regretted. However, it was singularly. The chances of similar accidents are remote in comparison with the frequency of accidents on streets and highways. Yet, it is difficult to find many cases in which one or even a number of traffic accidents have resulted in major or drastic changes in laws and official policies. A driver runs down several pedestrians; no new regulations, enforcement policies, judicial attitudes, or other correctives are apt to result. It was just a "regrettable mishap!"

There is another interesting aspect in the comparison of traffic mishaps and other public accidents. In most cases of public accidents, excepting traffic again, investigations result in some individual or agency being made the "goat". The public demands action and the best way out, from the standpoint of the public officials, may be to pin the principal blame or responsibility for the tragedy on an individual, or a specific group of individuals. Even though they may not correct the situation, a vice condition may be dismissed by firing the chief of police, a falling elevator is justified by discharging the director of safety, or the chief inspector. Rare are the cases in which public officials are made the "goat" in traffic accidents. Unfortunately, the driver or the pedestrian always gets this cognomen.

Government officials should realize more often that they have definite responsibilities in traffic safety and, what's more, they should seek the services of trained and qualified persons in meeting them. Public opinion must support and insist upon adequate staffing and budget which officials seek. Should public officials in general administrative positions be traffic experts any more often than they are building or fire experts? Many local government officials, who have no training or experience to so qualify them, and who often have worse than average accident records themselves, pose as traffic specialists. They make broad, sweeping decisions on traffic policy and even pronounce specific treatments. In traffic, the trouble often becomes acute because non-traffic officials "know all the answers." The leading traffic specialists know that they themselves do not know many of the answers. Supported by top ranking officials and the public, results in accident reduction and the decrease of congestion can be obtained, if bought and paid for, with competent specialists and needed budgets.

The Captain of Traffic or the Traffic Engineer gets turned down flat on a request for improved lighting on a street where many pedestrians have been struck by motor vehicles at night, but let a couple of purse-snatchings or hold-ups occur on the same street and the cause be attributed to dim lights, then the "white-way" is apt to appear.

Funds and authority for a simple traffic island which is sure to reduce accidents may be casually denied because of "expense".

Legislative bodies often don't listen to technical advice on traffic matters. Rumors have it that some Legislators will not re-establish important motor vehicle requirements now that the war is over. Often the reason is flimsy. Some say compulsory vehicle inspections are out to stay because they impose a hardship on farmers. Legislators may think it an imposition on the farmers. Farmers don't want to be unsafe; they can no more afford to have accidents than any other groups. The fault may be bad prewar administration or official neglect, but most likely it's a selfish aim to develop a political "benefit" program—make a "goat" out of the farmer in a matter as serious as traffic to get elected to public office.

In traffic, just the things are being done which would never be promulgated, much less tolerated, in other fields of public safety.

The public must insist upon, and support traffic programs that are for the good of the masses. On the other hand, local governmental authorities have too often disregarded and ignored constructive criticism, technical official condemnation and recommendation and public demand that requisite legislation, pronouncement, mechanical devices and enforcement be afforded to reduce or eliminate highway hazards.

In spite of complexities of governmental organization and all the other legislatives, tremendous traffic improvements are attainable. Some states and many cities have proven that the traffic problem is not an impossible one, where the proper officials have used their authority and the resources at their command to tackle the matter on a sound basis. Very favorable reductions in accidents have resulted and the use of the automobile has been an efficient pleasure rather than a grotesque dissipation.

In revamping the supervision of movement, the original bugaboo of the moronic driver or the mentally defective pedestrian, both devoid of all characteristics of caution or reasonable discretion is no longer tenable and must be discarded.

Every phase of human existence, domestic, industrial and recreational, pre-supposes the presence of an adequate arena in which it can be sustained. It is the recognized obligation of democratic government to provide these arenas. Highway use and movement have become a dominant phase in this nation's existence and the establishment of a proper sphere for its operation constitutes an unequivocal mandate upon official bodies and their official representatives.

A Good Job

During the first six months of 1948, there were 37 accidents where damage exceeded $50 at a Denver intersection. The police department wanted to install a $2,000 traffic signal. After careful study and analysis of the accident data for the previous three years by the Traffic Engineering Division, and after complete conditions surveys and drawings were made, it became apparent that the major problem was one of inadequate visibility.

The application of traffic engineering "daylighting" through corner restrictions to parking, and the installation of some red highway delineators, produced the desired results. Traffic Engineer Barnes reports that there was not one accident at the intersection during the last six months of 1948. Moreover, the entire corrective job cost less than $100.

Reference Notes

by J. AL HEAD *(Assoc. ITE)*

A comparison of the accuracy of origin and destination sampling was made possible by a recent survey conducted by the Oregon State Highway Commission in connection with the location of a trans-Willamette River bridge between Salem and West Salem. Two origin and destination studies were made for the same bridge four months apart on the same day of the week. A comparison of the results of these two investigations, one being an 18% sample and the other a 90% sample, revealed remarkable stability as follows:

Hours of Survey Directions Interviewed		7 A.M. to 8 P.M. Outbound from Salem	6 A.M. to 6 P.M. In and Outbound From Salem
Vehicles crossing bridge during 24-hour period from 6 A.M. to 6 P.M. on day of survey		14,413	12,856
Computed 1948 Average Daily Traffic		14,500	14,527
Useable Sample		2,095	9,030
Per cent sample of total outbound and inbound vehicles during period of survey		18%	90%
Per cent of trips with origins and destinations north of Center Street		37.0%	43.3%
Per cent of trips with origins and destinations south of Center Street		63.0	56.7
Per cent of trips to and from central business districts		39.8	37.4
Per cent of trips through the survey area		9.2	10.4
Per cent of trips for various routes:			
Route	*Highway*		
ORE22	Salem-Dallas	35.0%	34.3%
ORE221	Salem-Dayton	14.5	16.0
US99E	Pacific Highway (Portland leg)	5.0	6.0
US99E	Pacific Highway (Albany leg)	3.0	3.9
ORE211	Silverton Road	1.3	2.1
ORE22	Silver Creek Falls Highway	1.2	2.1
	All other roads	4.1	2.3
Per cent of trip purpose:			
	Work	37.6%	38.8%
	Business	30.3	33.8
	Recreation	8.4	7.4
	Shop	10.2	5.3
	Other	13.5	14.7

Transportation Association Speaks

Over $30 billion was spent by the people of the United States for all kinds of transportation in 1948—for transporting of people and goods by highway, by rail, air, water and pipeline.

Public and private funds in almost equal amounts have built up the vast facilities which make up the transportation system of today. The system includes 30,533 miles of inland waterways, in addition to coastal and intercoastal routes; 3,313,000 miles of highway, 390,000 miles of railroad track, 40,000 lighted operating airline miles, 6,000 airports, 140,000 miles of petroleum pipelines, and the equipment operating over these basic facilities.

Nearly $90 billion has been invested in creating these facilities. Through local, state and federal governments, taxpayers provided $46 billion for this machine, while $44 billion was provided by private investors.

Using these facilities are almost 31 million automobiles, almost 7 million trucks, 130,000 buses, 10,000 vessels engaged in commercial transport, 42,000 locomotives, 1,700,000 freight cars, 3,000 commercial airplanes, and some 80,000 private planes. Total facilities are greater than in all other countries of the world combined, and the cost to users is barely half the cost for comparable service in any other country of the world.

This vast, vital service has grown like Topsy, giving the American people unexcelled service in peace or war. But because it has developed without a policy or program to assure coordination and direction, it has resulted in an over-development and a colossal waste which threatens the solvency and efficency of the entire system.

Congress for more than twenty years has permitted nature to take its course, failing completely to parallel modern trends with modern policy. In this period over $35 billion of taxpayers' funds have been used to build a vast network of highways and airways, and to expand waterways. The existence of these new basic facilities has changed the entire transportation picture.

Shippers, utilizing these publicly-financed facilities, have gone into the transportation business for their own account in competition with the regulated common carriers. Over 85 percent of the trucks and 85 per cent of the ships and barges are now used by thousands of such private carriers.

And other thousands of so-called contract carriers have entered the business in this period. These agencies are only partially regulated.

Closely regulated and under constant pressure—of competition from unregulated carriers, of class legislation, and of pressure group demands—are most of the common carriers: 225 water lines operating on inland rivers, Great Lakes, coastal and inter-coastal services; 132 class I railroads and 550 smaller ones; 1,627 class I motor carriers engaged in inter-city trucking and thousands of smaller companies; 267 inter-city bus companies; 16 scheduled airlines, and 71 pipeline companies.

Individually, these closely-regulated carriers are, as a general rule, con-

...twice as long!

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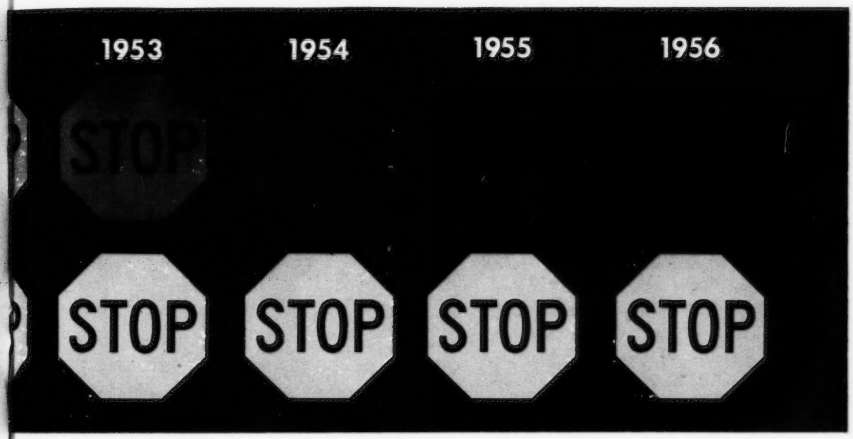

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ITE NEWS AND PERSONALS

Board Holds Important Meeting

Some of the most important decisions in the history of Institute Board meetings were made at the meeting of the Board of Direction in Tampa, Florida, on March 6, 1949. The Board was in executive session for seven hours with President Mitchell presiding. Other members of the Board present were Harry E. Neal and Wilbur S. Smith, Vice-presidents; and Harry Porter, Jr., D. Grant Mickle, Earl J. Reeder, Directors. Nathan Cherniack, who had expected to attend, was forced to cancel his trip at the last moment due to illness in the family.

The most important item on the agenda was the future disposition of "TRAFFIC ENGINEERING" magazine. Several changes in the editorial staff will be noted in this issue. With the resignations of the former Editor and Managing Editor, it was necessary to turn over complete editorial management of the magazine to the ITE Headquarters staff. The Board officially confirmed the appointment of the Executive Secretary as Editor and Miss Ann S. Lincoln as Managing Editor, effective with this issue. A proposal had been submitted by a New York publisher requesting that the entire business and advertising management of the magazine be placed in his hands with appropriate remuneration to the Institute based on income from advertising. The publisher was on hand in Tampa to personally present his proposal to the Board. It was the considered judgment of a majority of the Board that the Institute should first endeavor to retain complete control of its monthly publication, as is the practice of other Founder engineering societies. Accordingly, the final decision of the Board resulted in the business management being retained, on a trial basis, at Institute Headquarters. After a minimum trial period under this management, the Board will again review the entire matter and reach a final decision. The Executive Secretary was given authority in the interim period to add additional clerical help to the headquarters staff and make any other arrangements necessary to assure efficient handling of "TRAFFIC ENGINEERING" magazine.

One of the other important decisions of the Board related to a change in the name of the organization. It had been suggested that the Institute, in order to obtain better recognition as a national organization, should be called THE AMERICAN INSTITUTE OF TRAFFIC ENGINEERS, or some other appropriate title. It was the decision of the Board that a change in name at this time, while the Institute is in the midst of expanding its program of activity, might serve as a deterrent to advancement of the organization. Action on a change in name was therefore tabled for consideration at a future date.

The third most important decision of the Board was the adoption of drastic changes in the Constitution and By-Laws relative to Geographical representation of Directors. The United

States and Canada have been divided into six districts and directors will be elected to represent their respective districts. The complete details of these proposed changes in the Constitution and By-Laws will be submitted to the members prior to the Annual Meeting, in accordance with current provisions of the By-Laws.

Other action taken by the Board included a final decision on the design of the plaque for the annual Traffic Engineering awards (see March issue); a decision to arrange for immediate completion and publication of the revised TRAFFIC ENGINEERING HANDBOOK; a decision to defer final action on proposed Technical Bulletin No. 3—Traffic Actuated Signal Controllers—until the annual meeting; and a decision to refer to the Policy Committee for review and recommendation the action that should be taken by National Headquarters in support of local legislation relating to Traffic Engineering matters.

—o—

Annual Meeting News

The Annual Meeting Committees are now organized and have made considerable headway in planning the "biggest and best" meeting in the history of the Institute. Gordon Gravelle, Chairman of the Local Arrangements group, has cornered some able assistants in the Washington area to help him prepare for the comfort, convenience, and entertaining of delegates. Gordon's sub-committees are as follows: Registration, Martin C. Stark; Program printing, Norman Damon; Headquarters (bull) Room, "Stony" Stoneburner; Session Arrangements, Charlie Prisk; Field Trips, Lawrence Tuttle; Publicity, Bob Swain; Special Features, Charles Upham, Sr.; Budget, Grant Mickle; Ladies Program, Mrs. John B. Ecker; Sergeant-at-Arms, Burt Marsh. The (in)famous Resolutions Committee will be headed up by "Skinny" DeYoung, ably assisted by last year's Chairman, Hawley Simpson. It is recommended that all members plan now to attend the annual Biscuit Banter Breakfast.

The Technical Sessions Committee, under the direction of Ted Holmes, is currently formulating a first class series of papers and panel discussions. Ted is assisted by the Chairman of the *Institute's* six technical committees, and such able assistants as Dave Baldwin, Joe Havenner and Bud Yost. If any members or subscribers have some good ideas to offer for the technical program, Mr. Holmes will be pleased to receive all such suggestions.

PLAN NOW TO ATTEND THE ANNUAL MEETING SET FOR SEPTEMBER 25-28, 1949, AT THE WARDMAN PARK HOTEL IN WASHINGTON, D. C.

—o—

Secretary's Column—

Although much is being written in this issue relative to changes in editorial staff and business management of "TRAFFIC ENGINEERING" magazine, your Executive Secretary is of the opinion that this column should be devoted to the same subject. We are certain that members and subscribers will appreciate the changes involved in placing this added responsibility in the hands of National Headquarters. Nevertheless, we will do our best to maintain the pace set by former Editors and turn out a publication that will be a credit to the Institute and the traffic engineering profession.

For the information of our subscribers, the new editorial staff has been assigned Geographic responsibilities. It is possible that each of you may be called upon at some future date by the Associate Editor in your respective area for material suitable for publication in "TRAFFIC ENGINEERING" magazine. In addition to the selected editorial staff, the Secretaries of each Local Section of the Institute have

been appointed "ex-officio" members. We would like to take this opportunity to urge every subscriber who knows of available feature articles or other material that would be of interest to our readers to please contact National Headquarters or one of the Associate Editors indicating that you have something you would like to have published in a future issue. If you do not have a feature article available, perhaps you have a photograph or other illustration that could be published with suitable explanation. Finally, if you are doing work that will be of interest to other readers, we will be happy to receive a brief report by letter of your activities.

We sincerely hope that you will be pleased with the changes made in this issue and will appreciate any constructive criticism or comments you may have to offer.

ROBERT S. HOLMES

MEMBERSHIP ELECTIONS

ANDREY ABRAHAM POTTER, Dean of Engineering, Purdue University, formally accepted his election to Honorary membership in the *Institute* on December 31, 1948 to become the seventh internationally prominent individual in the history of ITE to receive this outstanding recognition. In his letter of acceptance to President Mitchell, Dean Potter expressed particular satisfaction at being placed in the same category with his good friends Paul G. Hoffman, Thomas H. MacDonald and Charles J. Tilden. First Honorary members of the *Institute*, now deceased, were William Phelps Eno, Dr. Comm. Cesare Solare of Milan, Italy, and Dean Arthur N. Johnson.

Dean Potter received his Bachelor of Science degree at Massachusetts Institute of Technology in 1903, and was awarded the honorary degree of Doctor of Engineering by Kansas State College in 1925. Further distinction followed when he was awarded honorary degrees as Doctor of Science from Northwestern University in 1936, followed by Doctor of Laws from Norwich University in 1944, Doctor of Science from Alfred University and Doctor of Engineering from Rose Polytechnic Institute in the same year.

Dean Potter's chosen professional career has been confined to only two employments in the past 44 years. From 1905 to 1920 he was Assistant Professor and Professor of Mechanical Engineering, and Dean of Kansas State College. In 1920 he transferred his affections to Purdue University where he has served as Professor of Power Engineering, Dean of Engineering, and Director of the Engineering Experiment Station. For one year, 1945-1946, he was Acting President of Purdue University, President of the Purdue Research Foundation, and

President of the Purdue Aeronautics Corporation.

Among the more important committee activities to which Dean Potter has devoted his time and energies are the Advisory Research Board to the Association of American Railroads, since 1925, and the Construction Committee of the U. S. Chamber of Commerce, since 1936. He also served as Consultant and Chief of the Engineering Defense Training Commission to the U. S. Office of Education from 1940 to 1945. He was President of the American Society of Mechanical Engineers and the American Society for Engineering Education and is now an Honorary member of ASME, as well as the National Association of Power Engineers and the American Association of University Professors. He also holds membership in the Transportation Engineering Foundation.

The decision of the Board to invite Dean Potter to Honorary membership was reached at its December 9, 1948 meeting in Washington, D. C., by unanimous acclamation of those present. This action was subsequently confirmed by letter-ballot from absentee Board Members. In forwarding the official invitation to Dean Potter, President Mitchell summarized the Board's deliberation as follows: "I want you to know that this invitation comes as a result of a careful investigation by the Board into your activities and interests as they relate to traffic engineering. We have received many reports from our membership of your keen interest in the Joint Highway Research Project and the Road School at Purdue University. Other members have been quite impressed with your sincere interest and concern in the development of our new profession. Added to this, you certainly made quite an impression on the members-at-large in your address at our Annual Meeting last October."

Buffalo Transit Survey

HENRY W. OSBORNE reports that the Common Council of the City of Buffalo, on February 8, 1949, directed the Board of Safety to institute an immediate study of the public transportation system. The Council is apparently not satisfied with previous studies undertaken by other groups to alleviate the local problem, and has elected to place the full burden of responsibility on the Board of Safety—and, more particularly, Mr. Osborne. Henry states that he is ready and willing to accept the challenging assignment and will try to put into effect those things that will help the transit company and also improve general traffic conditions on the city streets.

The Common Council ordered the Board of Safety to report as speedily as possible on a 5-point program to include: (1) a common downtown terminal; (2) relief of congestion; (3) route changes; (4) parallel (one-way) routing; and (5) express service to outlying districts. Henry states that this program will fit in nicely with existing plans covering one-way streets, peak hour parking prohibitions, large no-standing areas for bus stops, etc. To all appearances, friend Osborne will be a busy traffic engineer for some time to come.

Trenton, New Jersey: Two-thirds of the traffic moves in daylight hours, one-third in hours of darkness.

With one-third of traffic moving in hours of darkness, there were 63% of the total fatal accidents.

These fatal night accidents were concentrated on the principal thoroughfares—fifty-one fatalities out of a total of 78.

Of the 51 fatal accidents, 43 were pedestrians, one-half of whom were over 60 years of age. Drivers did not see the pedestrians in time to avoid the accident.

New Appointments . . .

HARRY HOWARD, JR. recently was appointed the first Traffic Engineer for the city of Jacksonville, Florida. Harry obtained leave of absence from the Florida State Department of Highways to move to his new position. He has complete authority to establish a new department of traffic and transportation. Harry became a member of the Institute in 1939 while serving under Wilbur Smith in the Traffic Engineering Division of the South Carolina State Highway Department. Since that time he has served with the National Conservation Bureau and the Florida State Road Department.

J. ANTHONY CARROTHERS was sworn in on March 21st as the Traffic Engineer to head up a new Bureau of Traffic Engineering for the City of Schenectady, New York. Mr. Carrothers will report directly to the City Engineer. Fred Fisch, former Traffic Engineer, left in April 1946 to accept an important position with the New York State Department of Public Works. Since July 1946, Tony has been connected with the Association of Casualty & Surety Companies. Prior to his experience with the Association, Tony was in the Detroit Traffic Engineering Bureau for several years. He completed a one-year graduate course at the Yale Bureau of Highway Traffic in June, '46.

DWIGHT T. MYERS (Assoc. Member, ITE), highway and traffic engineer in the Boston office of the Public Roads Administration of the Federal Works Agency was recently named City Traffic Engineer of Providence. Nominated by Mayor Dennis J. Roberts in action approved by the City Council, Myers took over his new duties on March 1st in the first major step in activating the new Traffic Engineering Department created last year. Myers was assured of a five-year term of office under legislation the Council passed for the first time in amendment of the Traffic Department ordinance.

GEORGE W. HOWIE, formerly Assistant Traffic Engineer in Portland, Oregon, became Cincinnati Traffic Engineer on January 11, 1949. Reorganization of the Cincinnati, Ohio Traffic Engineering Division is under way. New quarters are being provided at 411 Lincoln Park Drive and the Division is being expanded to several times its former size by the addition of junior engineers and other technical help. The Cincinnati Civil Service Commission is to hold a nation-wide examination for junior engineers in March. Howie is being assisted by M. C. Condrey who has held a key position in the Cincinnati traffic control picture for a good many years.

PERSONAL ITEMS

AL FORDE, Traffic Engineering Division, Washington Department of Highways, writes that his work is progressing nicely in Headquarter's office. Is spending considerable time checking design submitted by Districts and applications for traffic signals by cities. Future outlook will be much brighter if legislature clears all pending bills. BILL FROEHLICH, Chief Planning Engineer, Pittsburgh Regional Planning Association, is personally involved in complicated interchange at the Point of the Golden Triangle. DON MCNEIL is still going great guns. He now has three radio programs on traffic on three separate Pittsburgh stations. AL HEAD recently completed O-D Survey in connection with the location of a trans-Willamette River bridge between Salem and West Salem (See "Reference Notes"). ELIOT PARKER continues to keep the Army our *number one* subscriber. "T. E." magazine is distributed through Army channels to outposts all over the world. ITE headquarter's receives many complimentary letters from time to time from remote corners of the globe. HANK EVANS valiantly struggling with final draft of revised "Traffic Engineering Handbook". FRED HURD recently back from first trip to west coast as Director of traffic engineering course at Western Institute. It seems that "NICK" CARTER took him on fast "Cook's tour" of half the state. "SKINNY" DEYOUNG, as usual, poured *tea* at an informal farewell party immediately prior to Fred's boarding the train for the long jaunt back East. NORMAN DAMON in New Haven recently to address dinner meeting of Commercial Vehicle Section of New Haven Safety Council. TED MATSON appeared recently before New York State Association of Towns to deliver interesting paper. LLOYD MAEDER was also present for this statewide meeting.

A group of traffic engineers met at Columbus, Ohio, February 10 and 11 to develop standards and a means of appraising the Ohio Highway System as the first step in the Ohio Highway Study. Those participating included HARRY NEAL, State Traffic Engineer, the Chairman of the Committee; R. S. DEETZ, of the Ohio Highway Department who attended on behalf of H. J. ECKHARDT, who will be Secretary of the Committee; Guy Elbin of Franklin County; W. E. BILLINGS of Cleveland Auto Club; PAUL ROBINETTE, Toledo Traffic Engineer; GEORGE HOWIE, Cincinnati Traffic Engineer; GRANT MICKLE, C. J. MCCORMACK and P. J. BUCKLEY of Automotive Safety Foundation.

BILL ELIOT again breaks into print with a fine article on "Uniform Traffic Devices", September 1949 issue of American Standard Association's STANDARDIZATION . . . TONY CARROTHER'S article entitled "Coordinate Street Lights and Traffic Signals" appearing in the August 1948 issue of THE AMERICAN CITY has apparently created quite a stir! The November issue of this publication contained interesting discussions by KEN MACKALL, BILL BRANDES, RALPH DORSEY and FRED FOWLER. Apparently the discussion is now centered on the subject of "Old Fashioned vs. Modern Traffic Signals" as the February 1949 issue of American City contains further interesting comments from TONY CARROTHERS, BILL BRANDES, FRED FOWLER, JAY CZIZEK, TOM SEBURN and HANK BARNES. If you do not read American City, we suggest you obtain copies of these issues and brush up on the latest thoughts on this subject. "NICK" CAR-

TER writes that he has been made chairman of the University Committe of the California State Employees' Association and is also a member of the Street and Highway Lighting Committee of IES. He was recently elected to full membership in the latter organization. He states that he would still like to have members send in some fan mail for talented daughter Paulena. JERRY FRANKLIN recently "tied the knot" and is settling down to a happy married life.

Obituary

We regret to announce that on February 13th, Mr. Edward I. Shulman (Assoc. Mem., ITE), passed away in Veterans' Hospital, Dearborn. He had been in ill health for almost a year, although his passing was rather sudden. Ed was elected to membership in ITE in May 1941 and had taken an active interest in the organization and the work of its committees since that time. He had served the State Highway Department for the past 13 years. Ed received his "indoctrination" into the traffic engineering profession in 1937 when he joined the Planning Survey Division of the Department under Grant Mickle. Since that time he served in various Traffic Engineering posts in the Department, and at the time of his death he held the important position of Metropolitan Traffic Engineer, in responsible charge and complete supervision over State Trunkline Traffic Control in metropolitan Wayne County.

SECTION NEWS

Midwest Section

The Midwest Section held a meeting on February 24, 1949, in the Headquarters of the Western Society of Engineers. The meeting was attended by 16 members and one guest, Mr. Norman, Projects Engineer for the City of Chicago. Matt Sielski presented an interesting summary of the report on "A Highway Improvement Program for Illinois". This report was prepared by the Illinois Highway and Traffic Commission, and the study was made through the Illinois Highway Research Bureau. A great part of the basic information on highway matters was obtained from records of the Highway Department. County highway departments investigated the state aid system needs while cities prepared summaries of their requirements to bring systems up to standard. Township administrators determined the deficiencies and needs of their road system and all reports were carefully checked to eliminate any extravagant or underestimate of requirements. The report contains 12 chapters dealing with history, use, classification, standards, future improvement program, finance and taxation—450 pages. After summarizing the report, Matt then led a discussion on controversial matters, such as gas tax, truck rates (license fees), distribution of road fund money, and the administration of townships by counties.

Michigan Section

The Michigan Section held a meeting in Lansing on Tuesday, March 8, attended by forty-three (43) members and guests. Mr. Lee C. Richardson, Director of the Motor Vehicle

Division of the Michigan Secretary of State's Office, was the principal speaker.

The subject under discussion was the recodification of the Motor Vehicle Acts for Michigan. Mr. J. C. McMonagle contributed several items to the discussion in connection with Section 6 on Traffic Control Devices.

Members from Detroit, Saginaw, Cadillac and Toledo, Ohio, attended, in addition to many Lansing members. Those responsible for arrangements were Sidney Anger, Barney Cyberski, and A. C. Sherman.

The annual meeting of the Michigan Section will be held the latter part of April and the location will probably be Detroit. The committee in charge will be Holden LeRoy, Fred Meno, Frank Ronan and Glen Heggie.

New York Metropolitan Section

The Section held a meeting on February 24, 1949, and 24 members and guests were present. Vice-President Ed Wetzel presided and introduced the speaker of the evening, Mr. Hughes, Planning Engineer of the Public Roads Administration, who spoke on "Express Highways in Urban Areas". Mr. Hughes explained, by use of colored slides, the proposed network of Elevated Express Highways for the City of Boston. The plan was presented in two parts, namely: Dual use of the land over which the expressway passes; and, access of expressways with direct connections to existing roads.

Mr. Hughes explained, by use of the slides, how the expressway could be run through a building if necessary, thereby utilizing the space underneath and above the expressway. He showed how the space under the expressway could be utilized for commercial purposes and gave as an illustration the over-pass through Grand Central Station in New York, with the space underneath used for Airline Offices and stores.

The use of double-deck construction with traffic in opposite directions carried on separate levels was advocated by Mr. Hughes. He stated that the double-deck expressway would require one-half the right-of-way of a single deck expressway and one-third the right-of-way of a depressed expressway with a like number of lanes. Mr. Hughes said that such a project could be financed by bond issue with the rental of space above and below used to help retire the bonds.

A lively discussion period followed in which all members participated.

Completion of the paving of the Pan American highway through Mexico is scheduled for this year, President Aleman of Mexico, told J. H. Sembower, executive director of the International Road Federation, last week.

President Aleman declared that although the Pan American Highway is now passable through all of Mexico, there is a 40 kilometer stretch just north of the Guatemala border which has not been paved. President Aleman has ordered completion of this section in 1949.

Mr. Sembower, with other representatives of the International Road Federation in Washington, participated in the dedication of the Mexican Road Association in Mexico.

Personalities . . . .

In 1920 when Miller McClintock was beginning his work for a doctor's degree in the Department of Government in Harvard University, he was confronted with the problem of selecting some special field of research for his doctoral thesis.

He believed that one of the most valuable contributions which could be made to better municipal administration would be through the creation of administration standards and procedures which might be called "Standard Practice Codes". To establish this thesis he wanted to select a field of public administration which was free from traditional practices and which he believed would be of growing importance in the immediate future. He selected the then comparatively unimportant field of traffic management including the problems of congestion and safety with its wide implications in public engineering, sociology, economics, and law and judicial enforcements.

Neither McClintock nor his masters of Harvard could have foreseen that in the three-year period elapsing between 1920 and 1924 that the tremendous increase in automobile registration would have made the problem of traffic management on streets and highways one of the most critical public issues.

Paul G. Hoffman, who had met McClintock in one of his field research trips, was then Chairman of the Street

(See McCLINTOCK *on page 339)*

Over the years, there has developed in the offices of the National Safety Council a general impression that when the Council first opened its doors for business in 1913, Sidney Williams was already at his desk, impatiently awaiting the beginning of the safety movement.

This is inexact. As a matter of fact, Mr. Williams has been on the Council staff a mere 31 years.

He backed into the safety business (the term is his own) when the National Safety Council was five years old. His work as chief engineer of the Wisconsin Industrial Commission had attracted the attention of William H. Cameron, managing director of the Council. Then, in 1924, the Council came to the conclusion that the automobile was here to stay and that much more ought to be done about traffic safety. And because Sidney Williams has always been able to assimilate new duties and problems with apparent ease, he was assigned to head up this new enterprise, and thus became director of the Public Safety Division of the Council.

From that day to this, the name of Sidney J. Williams has been synonomous with traffic accident prevention. And despite his repeated avowals that he is not a traffic engineering technician and has never installed a traffic signal or made a traffic survey, there is a well-founded feeling around the country he is a very handy man to

(See WILLIAMS *on page 340)*

(McCLINTOCK, *con't. from page 338)*
Traffic Commission of the City of Los Angeles. He engaged McClintock's services as consultant and in 1924 the latter had an opportunity to put into practice the conclusions which he had drawn in his doctoral thesis, simply entitled "Street Traffic Control". The most striking innovations in historical retrospect of the Los Angeles job was that it involved primarily an engineering approach to the formulation of traffic regulations and that it included such "innovations" as pedestrian control, loading zones, uniform crosswalks, and an integrated traffic signal system. So spectacular were the relief results of McClintock's plan in Los Angeles that Mr. Hoffman, who had then become Vice-President of the Studebaker Corporation, arranged for the endowment of the Bureau for Highway Traffic, for the year 1925 in the University of California, and subsequently until 1938 in Harvard University, in which year it was moved to Yale University.

McClintock organized and continued as Director of the Bureau from 1925 until 1943. The activities of the Bureau involved research, graduate training, and ultimately recognized in-service training for traffic engineers. McClintock was always a firm believer in keeping academic research close to the realistic problems of traffic operation. As he once told President Lowell of Harvard, "the automotive industry and the normal growth of cities has provided us with our natural laboratories. We must study the factual materials on our field as they evolve on city streets in terms of congestion and in terms of accidents."

Dr. McClintock was one of the charter members of ITE and served as its first Vice-President and subsequently Director for a period of two years.

McClintock has said that his primary interest in traffic matters ceased in 1936 when, with the members of the Bureau, he formulated the so-called "limited way" formula of traffic design. Tempermentally, McClintock had drained this particular field of inquiry and to move into other fields of research was necessary. These took the form of an analysis of the economic effects of traffic upon the cost of doing business, the insurance burden of property damage and personal accidents and more particularly, the effect of daily traffic movements upon the pattern of trade and property values. Hence, the publication, published in 1937 by the McGraw-Hill Company, "Traffic and Trade".

By the early '40's, McClintock had become so deeply engaged in the business, marketing and economic aspects of traffic evolution, that he was sought as advisor by many different types of organizations, including the Traffic Audit Bureau where he developed comprehensive traffic volume studies for more than 17,000 cities and towns in the U. S. and Canada.

Because of his war time reputation as head of the War Advertising Council, McClintock was selected to head the Mutual Broadcasting System at the end of which contract he became Special Advisor to Mr. William Benton in the operations of Encyclopedia-Britannica, Britannica Films, and the Musac Corporation. These activities led to McClintock's present professional activities as President of Instructional Films, Inc., producing motion pictures for educational and television purposes and as Chairman of the Board of Communications Research Corporation, an engineering group engaged in advanced electronic developments.

McClintock has never had much time for hobbies and his daily activities have given him enough physical exercise so he has never been tempted

to engage in golf or other sports. He does, however, describe himself as an ardent yachtsman having never missed, for twenty years, every page of his favorite yachting magazine. All of this, however, has been in his head because he has never owned a boat more than twenty feet in length. This sport he is leaving to his two sons, Thomas, now a sophomore at Northwestern, and Bill, a freshman at Cornell. In recent years McClintock has become noted as an amateur enthusiast in orchid culture and similar horticulture activities, a hobby which he shares with his wife.

McClintock always used to say to his students that an engineering training could be applied helpfully to almost any field of human activity and that a trained mind never need fear the lack of interest and profitable employment in any field of human endeavor. In a sense, McClintock has demonstrated his own thesis.

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(WILLIAMS, *con't. from page 338)*
have around in time of traffic trouble of any sort. Sidney's modesty in this disavowal is further belied by the fact that he attended the now famous Pittsburgh meeting on October 2, 1930, at which the *Institute of Traffic Engineers* was organized, was a charter member, and served for four years (1933-1937) as Director.

Between his assignment to the traffic safety leadership of the Council's staff and the present, Sidney has served not only in that capacity, but as general manager of the Council (1943-45) and now as assistant to the president of the Council.

His current duties at the Council include general supervision of the Traffic, School, Farm and Home Divisions. He has a finger in such varied and important projects as the President's Highway Safety Conference and its Research Committee; the National Committee on Uniform Traffic Laws; the President's Conference on Industrial Safety, and the Federal Interdepartmental Safety Council (in this connection he is a White House consultant.) He also directs the Council's Member Training Course and is secretary of its Aviation Committee.

As if this weren't enough, he is chairman of the Safety and Industrial Health Advisory Board of the Atomic Energy Commission. To help while away the time he also has written two books, scads of articles and miles of speeches. In 1938 he received the C.I.T. Safety Foundation grand award for the greatest contribution to Public Safety.

To refute the belief that he was born in NSC offices, Sidney points out that after his graduation from the University of Wisconsin with a degree of civil engineering, and five years in the construction business, he took "just for fun" a civil service exam for building inspector for the Wisconsin Industrial Commission, landed the job and four years later was advanced to chief engineer, whence he came to the Council.

In addition to his affiliation with ITE, Sidney is a member of ASCE, SAE, Western Society of Engineers, and American Society of Safety Engineers.

For recreation (how many hours can he squeeze into one day?) he bowls and plays golf. He complains that due to some whimsy of fate, he bowls in the low 80's and his golf score contributes an acceptable bowling average. Bridge seems to be his favorite indoor sport.

"Each year", he laments, "I know less and less about more and more".

With that modest evaluation his colleagues around the Council and the country cannot agree.

OTHER TRAFFIC NEWS

Open Discussion

Ed. Note: In the June, 1948 issue of "Traffic Engineering" magazine, under Open Discussion, we printed an article entitled "What is a Traffic Engineer?" In a different manner, Mr. Blaisdell (Mr. Average Citizen) poses the same question. Further discussion of this vital question is invited.

The technical approach to safe highways is futile unless the public is willing to accept scientific progress and, even more important, has reached a point of emotional stability able to cope with it. If I am to bring traffic engineers a worthwhile message I must presume that they are already sold on the need for safe highways and safe highway transportation. With this as a premise, the best I can do is to suggest ways and means whereby *you*, as one of the technicians of safety, can do a better job of informing the public as to the importance of traffic engineering.

The dissemination of such information is actually a job of salesmanship, for there is a definite gap to be bridged between the "engineer mind" and the "layman mind". Events of the past decade have done much to widen this gap. Mainly for political reasons engineers, educators and planners have been pushed toward a position of disrepute—labeled as dreamers or worse. The layman's idea of the engineer has been warped by much sly innuendo, by the concept that our salvation lay in the clear-headed thinking of the business man, aided and abetted by a little horse sense. The feeling might be expressed in the terms of people who look at an Electrical Engineer as a man who can tell you all about a "single-phase, front contact shunt lock repeater", but can't do anything as practical as repairing a light socket.

This is a strange phenomenon in a nation that has almost worshipped a god of mechanical or technical ability, has thrilled at such marvels as the Golden Gate Bridge, Empire State Building or the Moffet Tunnel. Only recently, with the release of atomic energy, has the public mind begun to wonder if the scientist is wholly impractical.

You may be of the opinion that such an attitude does not exist toward the traffic engineer, and the role of engineering in the quest for highway safety. May I remind you of the findings of the Opinion Poll sponsored by the National Committee for Traffic Safety by the National Safety Council and conducted by Opinion Research Corporation of Princeton, New Jersey. When a scientifically selected cross-section of the American people was asked what factors, in their opinion, could solve the traffic safety problem in their community, only 8 percent gave any weight to the contribution of engineering. When the question was re-phrased to determine public opinion on means of preventing "driver accidents", no one mentioned engineering. Neither engineering nor education had any traffic safety significance in the public's attitude until these elements *were suggested by the poll taker*. Even then, when it was easy to jump on the bandwagon, only 30 percent of the people could visualize engineering as one of the keystones in the safe highway structure. More recently I have learned that the Engineering Report of the President's Highway Safety Conference is doubtless the least understood of the eight sets of committee recommendations.

The task facing the traffic engineer, as I see it, is one of *humanizing* his profession if he wants engineering to receive its full share of the organized public support now being generated for the traffic safety program. There must be specific ways to accomplish such an end, and I have the temerity to suggest four steps which you can take in this direction:

First, poularize the language of your studies and reports, at least in such editions as are turned out for public consumption. Your problem here is not unlike that of the legal profession, which has surrounded itself with a lingo including so many "aforesaids" and "to wits" that it has left the public in hopeless confusion.

You may feel that this question of terminology is only a figment of my imagination. Read, sometime, the recommendations on Page 47 of the Engineering Report in the Action Program of the President's Conference where it proposes: "use of raised median strips . . . adequate turning radii . . . and intersection channelization." These words may mean a lot to you, and a little to me, but the average mind—the average Joe and Jane who tolerate soap operas and singing commercials—just can't take it. They don't know what you are talking about!

Studies of human behavior indicate that when people fail to understand they become indifferent, dismissing the problem from their mind and erecting a psychological shield of imagined security. It is this same mental pattern which places the average man behind the wheel of his own automobile with the falacious belief that all the terrible things that happen on the highway just can't happen to him!

Second——capitalize on every opportunity that presents itself, and make a few opportunities through your own initiative, to present the viewpoint of the traffic engineer to public support groups—in plain terms. Of the many requests that go across my desk for speakers on traffic safety at service club meetings, parent-teacher groups, at state and even national conventions, I have never seen a demand for a traffic engineer. Yet I know that engineering has a story to unfold which, in addition to being vital, is colorful and thrilling.

Third—call attention to the role of traffic engineering in projects having wide popular appeal and vast public implications. Don't "hide your light under a bushel." In parking, as an area of public exasperation, you have a grand opening for your story. The average driver sees parking only as a matter of enforcement—the blue uniform with the silver shield and the ticket is there in plain sight. The studies and plans of the traffic engineer are gathering dust on the drafting table. Parking boils down to a matter of dollars and cents with the business man. If he is your ally, you are on the way to achieving public support for the whole program of traffic engineering.

Fourth—beware of an "engineering dilemma." We all like to say that we can now build a highway with a safety factor which virtually eliminates physical hazards. Access control, chanelization, divided roadways all tip the balance toward mechanical and human failures as accident causes. However, I find a note of doubt beginning to creep in to the thinking of public support leaders and educators in their effort to reconcile the gains of certain super-highways with the accident record. You should be aware that there is a growing belief which

holds that although we may be able to plan and construct a safe highway from an engineering viewpoint, there is the possibility—yes, even the probability, that the psychological and emotional nature of the average driver is not yet conditioned to the safe use of such a road.

The dilemma to which I refer is that of engineering a highway which, like Frankenstein's creation, becomes a monster we cannot control. Of course I do not advocate retrogression in traffic engineering, but I do suggest that if those in charge of the research project on highway accident causes which was advocated by the Action Program meeting of the President's Conference are looking for areas to study, here is a place where a formula is needed. I realize that my analysis is but a prefunctory introduction to a vast problem.

Those of us who work in the field of organized public support for highway safety want traffic engineering as a down-to-earth partner in our endeavor. We want to help you build greater public understanding of your part in traffic accident prevention. In order to do this, we must have some very tangible symbol of traffic engineering. Motor Vehicle Administration has a driver's license, or a certificate of financial responsibility—education has a dual-control automobile—enforcement the police cruiser with the screaming siren — laws and ordinances the machinery of the Court—public support and public information the flash in a news story, a radio "plug" or a poster. What object or action can the public link with traffic engineering?

If we can assist you in finding such a symbol as a step in the promotion of *traffic engineering consciousness,* we will have performed a real service to you, to ourselves and to the public welfare.

To attain such a goal, you must keep constantly before you in your technical development the thought that traffic safety is a problem of mass psychology, and that the *final* solution lies not in tangents and curves, but in *human emotions.*

PAUL H. BLAISDELL,
Executive Director
National Committe for Traffic Safety

The above sign appeared recently in the window of a grocery store on the main street of a small mid-western city. The city has no parking lots near this store, which is in the central business district. This street and several others in the area, has parking meters.

May 2-4 Washington, D. C.
Annual Meeting, Chamber of Commerce of the United States, Chamber Building.

May 19-20 Detroit, Michigan
Michigan State Safety Conference, Book Cadillac Hotel.

June 1-3 Washington, D. C.
President's Highway Safety Conference, Departmental Auditorium, Federal Works Building.

Week of June 13th Columbia, Mo.
Missouri Traffic Engineering Conference, University of Missouri.

(Representatives from the Yale University Bureau of Highway Traffic, Highway Research Board, a number of officials from other states, and officials of Missouri interested in traffic problems will take part in the Conference.)

June 6-18 New York, N. Y.
Eastern Regional Institute for Traffic Training, New York University.

July 12-23 Evanston, Illinois
Midwestern Institute for Traffic Training, Northwestern University.

New Educational Film

A new film entitled "Wheel Sense" has just been completed, and is now available FREE, except for transportation, from Association Films (Y.M.C.A. Motion Picture Bureau), 347 Madison Avenue, New York City. The film was produced to teach before-the-fact driving safety to young persons just learning to drive, but it can benefit car drivers of all ages.

Highway Engineering Conference

The 35th Illinois Annual Conference on Highway Engineering was held at the University of Illinois on March 1, 2 and 3, 1949. The Conference was being sponsored jointly by the Illinois Association of County Superintendents of Highways, the Illinois Division of Highways and the Department of Civil Engineering of the University of Illinois with the cooperation of the Extension Division of the University.

The purpose of the Conference was to bring together the state and county highway engineers, city engineers, township road commissioners, highway contractors, representatives of the highway user groups and other highway minded people to discuss the most important of the current highway engineering problems and to give those in attendance an overall picture of our highway transportation needs and the steps necessary to satisfy those needs.

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Registration of Traffic Engineers

Ed. Note: From March, 1949, issue of NCSBEE quarterly publication THE REGISTRATION BULLETIN.

There has been considerable interest shown recently by the members of the National Council of State Boards of Engineering Examiners in the registration of traffic engineers and, in order to furnish them with some useful information on this subject, a copy of the 1948 Proceedings of the Institute of Traffic Engineers has been mailed to the office of each Member Board. These copies were secured through the courtesy of Mr. Robert S. Holmes, Executive Secretary of the Institute.

The Proceedings contain an excellent article on "Engineering Registration of Traffic Engineers" by Dean N. W. Dougherty, Director of NCSBEE.

ON THE SHELF

Asselin, J. O.

Mass transportation problem in Montreal. A study and analysis. Dec. 1948 100p. n.p. A study of transportation problems in several large cities with their proposed plans, plus a study and analysis of Montreal transportation conditions.

American Technion Society

Technion Year Book. 1948. 252p. Includes 22 original papers on topics pertaining to technical, industrial, and educational progress in the U. S. and Israel.

Kansas. State Legislature

Highway needs of Kansas. An engineering analysis of one of the reports authorized by the Automotive Safety Foundation. 1948. 136p. n.p. A year's study of present and future street and highway requirements in the state.

National Conservation Bureau

Traffic engineering and the police. 1948. 104p. $2.00. A textbook designed to help police in handling traffic problems. Revised.

Oregon. Legislative Interim Committee

Report of a special investigation concerning the functioning of the motor transportation code in Oregon. 1949. 16p. n.p.

Public Roads Administration. Federal Works Agency

Federal legislation and regulations relating to highway construction through July, 1948. 18p. n.p.

Swetland, R. M.

Adequate street lighting a community necessity. American Public Works Association. Bul. no. 56. n.d. 18p. n.p.

U. S. Printing Office

National transportation inquiry. Progress report of the committee on interstate and foreign commerce. 1948. n.p. Committee report containing section on the cooperative project of transportation policy.

Vermont. State Highway Department

Vermont's 1948 highway needs. 23p 1948. n.p. A study of the improvements made in Vermont highways since 1940, and an analysis of the 1948 highway needs, done in cooperation with the Public Roads Administration.

New Standards Pamphlet

Publication in a single pamphlet of a series of papers on the subject "What Good Are Standards?" is announced by the American Standards Association. The papers which were presented at the 1948 annual meeting of the Association, include discussions of such important problems as the legality of standardization, the standardization work of the Munitions Board, and the functions of standardization in such company operations as purchasing, manufacturing, and marketing. The importance of standardization to wholesalers and retailers, and to the ultimate consumer, as well as to manufacturers, is taken up by authorities in each field.

Seek to Change Earmarkings Of Indiana Funds

The Indiana Municipal League will ask for revision of the distribution of the proceeds of motor vehicle and gasoline tax collections to give municipalities 20 percent, estimated at $7,800,000 annually. At present, municipalities get 16 per cent of gasoline tax receipts and $3 million from proceeds of registration fees and operator's license fees.

Yale Offers Fellowships

Ten Fellowships in Traffic Engineering for the academic year 1949-50 are available to residents of the continental United States, as announced by the Bureau of Highway Traffic at Yale University.

The Traffic Engineering course at Yale is designed to provide a broad foundation in techniques of traffic operation and to give the student increased skill and ability in the analysis of highway traffic problems. The course of graduate study and research is open to men who have received a degree in engineering from an accredited college.

The 10 Fellowships amount to $1,400 each and provide a full academic year of graduate study which begins on September 19, 1949. The Fellowships include a living stipend of $800, tuition fee of $400 and a maximum of $200 to each Fellow for his individual research project to be approved by the Bureau.

Nine of the awards are made possible through a grant from the Automotive Safety Foundation and one was established by the American Transit Association as a memorial to Messrs. Charles Gordon and Claude D. Cass, formerly managing director and general counsel of the group, respectively.

Applicants for the Automotive Safety Foundation Fellowships should have practical experience in city engineering, highway engineering, or in related fields. Preference will be given to those applicants who are now employed in street and highway engineering and who secure a leave of absence in order to return to their present employer.

The Gordon-Cass Memorial Fellowship is granted to the applicant demonstrating a basic interest in urban transportation problems and preference will be given to men who are now employed in the field.

Upon successful completion of the course of study, students will be awarded a Certificate in Highway Traffic, by the Committee on Transportation at Yale University.

Requests for additional information and application blanks may be obtained from the Director, Bureau of Highway Traffic, 311 Strathcona Hall, New Haven 11, Connecticut. The closing date for application is June 15, 1949.

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Western Institute Reports

More than 200 traffic control and safety specialists participated in the First Western Institute for Traffic Training held recently at the University of California in Berkeley. Registration included 42 enrollees in the Traffic Engineering course, directed by Fred W. Hurd, Associate Professor, Yale Bureau of Highway Traffic. All reports received from coworkers and participants indicate that Hurd performed an outstanding job as principal instructor.

Enrollees in the various courses which comprised the curriculum came from all areas of California, Oregon, Washington and the other 11 western states. A scattering of the specialists hailed from points as widely separated as Miami and Honolulu.

Professor Harmer E. Davis, director of the University of California Institute of Transportation and Traffic Engineering, which sponsored the affair in cooperation with the National Committee for Traffic Training, expressed the University's hope that the conference can be made an annual affair.

"We are particularly pleased with

the scope of the Institute and the amount of interest shown among those most responsible for planning and enforcing traffic safety", Davis said. "We hope the Institute can be presented at Berkeley and on the UCLA Los Angeles campus on alternate years to fill a very evident and pressing need for trained traffic specialists".

Norman Damon, vice-president of the Automotive Safety Foundation and chairman of the National Committee for Traffic Training, outlined some of the shortages in personnel in this vital field, in an address opening the conference.

"We must count our shortage of highway engineers in the thousands at a time when we are entering the largest road building program in our history", Damon said. "To meet that challenge, we need as a very minimum 250,000 trained traffic management personnel within the next five years. We have made only a start on traffic training", Damon said. "As part of this start, the University of California and other institutions which have contributed to, and acted as hosts for, such traffic conferences as this one are to be congratulated."

Street Management Report For L. A.

Centralization of traffic administration in a new Department of Traffic Engineering, headed by a Director, and creation of a five member Traffic Commission have been recommended for the City of Los Angeles as two of the major steps necessary if the city is to cope successfully with congestion and accident problems.

Also urged for "immediate action" is the recommendation that the city establish a Technical Coordinating Committee of city department heads to act in an advisory capacity on traffic matters concerning interests of their departments.

These and other recommendations are part of a formal report, entitled "'Street Traffic Management for Los Angeles,"; presented by D. Grant Mickle, Chairman of the Los Angeles Traffic Survey Committee, to the City Council, Mayor Fletcher Bowron, and other government officials and civic leaders of Los Angeles and surrounding communities.

Mr. Mickle said that "adoption of a modern street traffic management program in accordance with the recommendations of the Traffic Survey Committee will result in more efficient use of the streets in lessened congestion, and in fewer accidents.

"Under a traffic administration fitted to needs and faithfully carried out, with emphasis on professional and technical standards, the gains should far out-balance the cost. Gains, however, will not be spectacular; rather they will come gradually. But the gains will be accumulative and permanent.

"Operating expenses of the recommended program should be in the neighborhood of present costs. Consequently, if value is to be placed on prevention of death and accident, on reduction of congestion, and on a more free-flowing traffic, there is but one answer. That is adoption of a forward looking traffic administration and its placement on a firm foundation comparable to that of other well established functions of city government."

Nine-Month Survey

The report, containing the findings and recommendations of the Committee, follows nine months of study covering all phases of the city's traffic problem and administration of traffic

control. It deals specifically with factors affecting administration, and its recommendations are confined to administrative organization and procedures, and coordination of functions.

The three "immediate action" recommendations, the report points out, are those which can be effected under existing authority. The Los Angeles Charter, the report observes, "grants broad authority to the City Council for administering traffic, including the choice of conferring traffic responsibility on either an existing agency or one newly created".

Two other recommendations require amendment to the Charter. One would assure permanency of the new governmental structure by making specific provision for the Traffic Commission, Department of Traffic Engineering and Technical Coordinating Committee. The other would provide for "transfer to the Department of Traffic Engineering the duties of locating transit stops, street lighting, design, of channelization and redesign of intersections".

It was through the early and active interest of Mayor Bowron and members of the City Council in the city's growing traffic problem that the need was felt for a technical study of the city's difficulties. The traffic survey was authorized by the City Council last spring and three engineers were made available to the city to serve, upon appointment by the City Council, as the Traffic Survey Committee.

Mr. Mickel, Director of the Traffic Engineering Division, Automotive Safety Foundation, Washington, D. C., was appointed chairman. With him on the Committee were Joseph E. Havenner, Manager, Public Safety Department, Automobile Club of Southern California; and Stuart M. Bate, Chief Engineer, Los Angeles Traffic Association.

Work Starts Immediately

The Committee went to work immediately to appraise the street traffic problem; to determine how various aspects of it were being handled by the several city departments involved, and to determine deficiencies in traffic management. The survey involved examination of office records and reports, field investigations, conferences with all affected city department heads, and careful review of all Charter provisions and ordinances bearing on the subject.

The Traffic Survey Committee's recommendations were drawn after analysis of survey findings indicated the following general needs:

Centralization of authority, with functions of traffic operations and traffic planning placed in a traffic administration department.

Department status for traffic administration, equal in rank authority and responsibility with other city departments.

Expansion of present traffic engineering functions with more emphasis on factual studies and planning.

Coordination of functions of various city departments whose secondary responsibilities relate to traffic.

Factual determination of needs on a city-wide basis in traffic operations and planning.

Integration of the traffic control program in Los Angeles with those of adjacent cities and counties and the state.

Nine City Agencies

The Traffic Survey Committee notes in its report that division of functions in traffic matters among nine city agencies has resulted in traffic management and operation which the report classifies as "far below par".

"There is a traffic agency", the report explains, "but its responsibilities are limited in vital respects. There

are no provisions insuring cooperation or exchange of information with other city or outside agencies". Lacking the administrative stature such as held by water supply, police and other city departments, the traffic agency, the report points out, even though staffed with engineers and expert technicians, cannot function efficiently.

The nine city agencies involved in traffic matters are listed as the City Council, Bureau of Street Traffic Engineering, Department of City Planning, Department of Public Works, Bureau of Engineering, Bureau of Street Lighting, Bureau of Street Maintenance, Department of Public Utilities and Transportation, and the Police Department.

"In some instances," according to the report, "the traffic duties are properly lodged in these agencies; in other cases they rightfully belong to the traffic agency."

The new centralized traffic management structure, as recommended in the report, is designed to eliminate confusion and inefficiency resulting from the present division of authority and overlapping of functions.

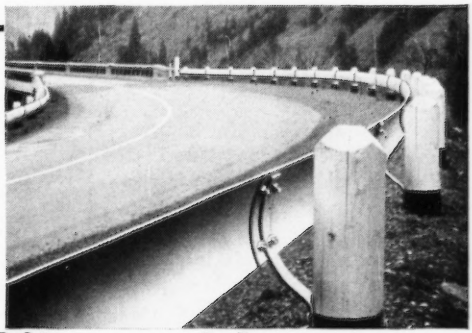
The proposed Traffic Commission would be composed of members selected for their broad interest and knowledge of street traffic and its needs. It would determine policies, referring matters requiring City Council action to that body. The Commission would be invested with the power to adopt rules regulating parking or other use of vehicles on the streets. These rules, however, would not remain in force more than 30 days unless incorporated into a city ordinance.

Recommend Policies

The Technical Coordinating Committee would be composed of represen-

Exceeds all state safety specifications

TUTHILL HYWAY GUARD



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tatives of the various departments whose work involves traffic. It would recommend policies, warrants and standards to the Traffic Commission whose action should be approved by the City Council. Traffic installations would conform to adopted standards. Exceptions would be made only upon two-thirds vote of the Council. It is recommended that the Coordinating Committee govern bases of approval for all traffic regulations and control devices.

Installation of traffic signals and other control devices should be authorized only after need is demonstrated by technical studies, the report recommends. Under present conditions installations often are authorized at a faster rate than they can be made, frequently resulting in application of control measures and devices at locations of lesser need, according to the report.

(Continued next month)

Television Restrictions

Measures prohibiting or restricting the installation of television receivers in automobiles have been introduced in nine states. Introductions of these bills are generally in states in which television facilities now are available. The introductions have been made in *California, Connecticut, Indiana, Maryland, Massachusetts, Montana, Nebraska, New York* and *Ohio*. The National Committee on Uniform Traffic Laws and Ordinances is balloting on a proposed amendment to the Uniform Vehicle Code (Act V) to prohibit any television receiver "which is located in the motor vehicle at any point forward of the back of the driver's seat, or which is visible to the driver while operating the motor vehicle."

When You Change Your Address

. . . please notify us promptly. Your copies of "Traffic Engineering" will then reach you without delay and without interruption.—Traffic Engineering Magazine, Strathcona Hall, New Haven 11, Conn.

Jobs Available

Experienced Traffic Engineer required to set up new Division of Traffic Engineering for the City of Dayton, Ohio. At least 9 years of professional engineering experience including at least 2 years in responsible traffic engineering work, or an equivalent combination of experience and graduate study is necessary. Starting salary: $5,550 - $6,030 per year, depending on experience. Good opportunities for advancement as activity develops. Write full particulars of education and experience to Carl F. Lutz, Personnel Supervisor, City of Dayton, Ohio.

—o—

Applications are desired from anyone interested in applying for the position of Traffic Engineer in the City of East Orange. Anyone interested in this position should get in touch with Theodore J. Young, City Engineer, City of East Orange, New Jersey, for further information.

PROOF!

that CATAPHOTE GLASS REFLECTOR BUTTONS ARE LOWEST COST MEANS OF REFLECTORIZING SIGNS

8 YEARS OF CONTINUOUS SERVICE (from 1940 until now) on the Pennsylvania Turnpike (shown above) and these delineators continue to give top visibility under every kind of adverse weather condition. There has been *no* maintenance or replacement of these glass reflector buttons since their installation and their durability has been a big money-saver for the Turnpike.

They should last many more years.
All we know is—

THEY'RE STILL GOING STRONG!

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REFLECTORIZED SIGNS AND SIGNALS • GALVANIZED SIGN POSTS • PARKING SIGNS
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LETTERS TO THE EDITOR

NEW YORK TRAFFIC COMMISSION

In your March issue of "Traffic Engineering", on page 282, you comment, under the head of "New York Gets Traffic Commission" as to the makeup of the Commission. You state: "Mayor O'Dwyer of New York appointed John C. Riedel, formerly chief engineer of the Board of Estimate, as the commission's first chairman."

Would you be good enough to correct this statement, because my appointment as chairman of the New York City Traffic Commission did not in any wise interfere with my position as Chief Engineer of the Board of Estimate. In fact, the law creating the commission causes the members of the Commission to be ex-officio. The Commission consists of: the executive director of the Department of Traffic Engineering, the Police Commissioner, the Commissioner of Public Works, the Chairman of the Tri-borough Bridge and Tunnel Authority, the Chairman of the City Planning Commission, the Chairman of the Board of Transportation and the Chief Engineer of the Board of Estimate.

John C. Riedel
N. Y. City Traffic Commission
New York City

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● Our apologies to Commission Chairman Riedel for the erroneous use of the word "formerly" in connection with his position with the Board of Estimate.—ED.

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RESOLUTION

This will acknowledge copy of the recent Resolution of the I.T.E. Board of Direction regarding the services of those of us who from time to time have served as editor of "Traffic Engineering."

It is gratifying to know that the Institute has progressed to the point where the publication of "Traffic Engneering" can be taken over as a staff activity. It was very thoughtful of the Board to adopt the Resolution signifying the Institute's appreciation of the services rendered by volunteer personnel. I can assure you that it was a pleasure to serve as the first editor of "Traffic Engineering" and it is gratifying to note the excellent magazine which has grown out of our early efforts.

W. Graham Cole
Member—ITE
Metropolitan Life Insurance Co.
New York City

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I was surprised and pleased to receive your note and the copy of the Resolution of the Board of Direction of the Institute of Traffic Engineers expressing appreciation to the list of editors of "Traffic Engineering".

It seems a long time back now to that period when I was struggling each month to wring a few articles out of the membership in order to keep the magazine alive. Nowadays every time I receive a copy of it I am impressed with the progress that has been made, and after reading your plans for the future, I am convinced that the magazine is really about to become of age.

I have learned from bitter experience that I had better not make any wild promises while in a promising mood, but if my present resolution lasts more than a few days, I shall try to produce a contribution for you from time to time.

Lawrence S. Tuttle
Associate Mem.—ITE
U. S. Public Roads Administration
Washington 25, D. C.

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We hope other members and subscribers will follow Mr. Tuttle's example and resolve to produce a contribution for TRAFFIC ENGINEERING magazine.—ED.

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Your Resolution to the past voluntary editors of TRAFFIC ENGINEERING is greatly appreciated.

Every single one of us worked for the time when the magazine would have such stature that it would be a decided asset to the Institute. It is gratifying to me to see "Traffic Engineering" being placed in the hands of our competent Headquarter's Staff and made a more integral part of Institute affairs.

It is with deep thanks that I received your Resolution and pleasure in remembering that I had a decided opportunity to serve the Institute as one of the voluntary editors.

Leslie Williams
Member—ITE
Traffic and City Planning Consultant
New York City

The pressure of my "bread and butter" activities made it impossible to retain the editorship of "Traffic Engneering" magazine. While I regret my inability to aid the Institute in this activity, I cherish the experience of the last 21 months. This has been one of the most remarkable periods in the Institute's history. Certainly ITE, through acquisition of an Executive Secretary, increase in membership, and universal recognition of the traffic engineer, has made amazing progress. I would like to express my sincere appreciation of the services of "Johnnie" Johnson who, through this last 21-month period, has contributed materially to the success of the magazine in his capacity as Managing Editor. He assumed the entire responsibility for preparing and editing the last issue (March) prior to turning over these responsibilities to National headquarters.

Robert O. Swain
Associate Mem.—ITE

International Road Federation
Washington 5, D. C.

———o———

The Resolution recently approved by the ITE Board of Direction was forwarded on to me today with your attached note.

I was delighted to hear from you and appreciate your thoughtfulness.

Laurence B. Tipton

Educational Consultant
Princeton, N. J.

———o———

HISTORY

A reader has asked us to find out the name of the person, supposedly a woman, who invented the idea of painting a white line down the center of highways. The writer was told she did it here in Brooklyn during the administration of Mr. Lewis H. Pounds, Commissioner of Borough Works from 1910 to 1913. Mr. Pounds died in 1948. I have received a reply from Mr. Charles A. Riedel, Chief Engineer, N. Y. City Bureau of Highways and Sewers, that his files reveal no such information and the suggestion that I ask you for it.

Any help you can give me as to the name of this inventor, his or her address and the date and place of the invention will be greatly appreciated by both our correspondent and our future file users.

Betty L. Hale
Librarian, Index Dept.

Brooklyn Eagle
Brooklyn, N. Y.

———o———

● From the records available, the first center-line marking appeared about 1600. About that time a road was built from the City of Mexico in which the paving materials showed a center-line of contrasting color. This center-line was of white material and was apparently designed to separate the flow of traffic in opposite directions. Our former historian (now deceased) uncovered information to the effect that lane lines were marked on the roadways of the Brooklyn Bridge after streetcar tracks had been laid. At the same time regulations were posted for slow vehicles to keep in the right-hand lane. The placing of streetcar tracks in the middle portion of the bridge had the effect of defining the center of the roadway. Since the Brooklyn Bridge was opened in 1883, it is possible that the first use of the paint lines on the roadways appeared in New York prior to the beginning of the 19th century. The city files should provide information as to when these streetcar tracks were laid.

The first indication of other paint lines on the roadway appeared in 1907 in Portsmouth, Virginia. A Mr. Schertzer, at that time engineer for the Eno Foundation for Highway Traffic Control, painted "STOP" lines at some locations in the urban district of Portsmouth. Mr. E. P. Goodrich, Consulting Traffic Engineer of New York City, has stated that he painted the first crosswalk lines on the streets of New York City in 1911. Similar lines were put down in Providence in 1913 and in Minneapolis, Minnesota, in 1914. Detroit first used center-line pavement markings in 1918.—ED.

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GENERAL

. . . . We are very glad to learn that you are taking strides toward obtaining better circulation and going into a standard size magazine in October. We believe this should be accepted very well in the field by various members of the ITE as well as those closely associated with the Institute . . .

Gerald E. Shuttleworth
Junior Mem.—ITE

Hunt Company
Detroit, Michigan

when life and money are the measure—

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Can you maintain real safety on your highways with "out-of-place" materials that merely color the background of Warning Signs — and confuse the message? The warning should be so readable at safe reacting distances that motorists will see it, understand it and obey it! Only a sharp, strong ***message*** will accomplish this purpose — ***reflectorized*** with Grotelite Prismatic Reflectors. They are available now for signs made locally, or complete with New Grote Safety Signs.

No need now for substitute materials — you do not have to replace entire sign surfaces due to accidents or vandalism — and Grotelite Prismatic Reflectors reduce your costs. Write for details and new prices.

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A Grote REFLECTORIZED SIGN IS THE BRIGHTEST MESSAGE ON THE ROAD

The Parking Problem In Dallas

by W. C. BRANDES, *Mem., ITE**

Just what is the parking problem? Is it a critical mal-adjustment in urban centers? Is it a natural and expected result of population growth? Can this problem be solved or will it always be with us? What is the best method toward solution? These are a few first-hand questions some of which can be answered, others not. It is generally acknowledged however that parking and traffic congestion are the major problems confronting American cities today. Dallas has one of the most acute cases of all our cities in view of its poorly planned street pattern.

Factual Information Obtained

Before discussing the Dallas parking problem I should like to cite you certain data pertaining to the current growth of activity in our city. Several years ago our municipal Department of Traffic Control set about to gather factual information for two purposes, first to enable us to make an analytical approach in search of solutions and secondly to emphasize to those interests involved the important need for action.

Our first major study, made in 1945, was an inventory of all parking facilities in the downtown area. This inventory has been maintained in up-to-date form ever since. Then in June of 1946, with the aid of about 500 Boy Scouts, we made a cordon count of all vehicles and people entering the central business district. The count was made at specific points on each street leading into this area on a typical business day from 6:30 A.M. to 7:30 P.M.

In June of 1948 we made another *partial* (approximately 70% complete) cordon count of the same area. By expansion and comparison of numerical data we have evidence of a tremendous growth of activity in the area. Some of the more salient comparisons obtained are shown in the tables on the following page.

There are many more detailed figures not shown including analysis of mass transit riding, commercial traffic, etc. However, it is significant that transit riding dropped off slightly while taxicab passengers showed the greatest increase. Transit riding was adversely affected because of the greater availability of new automobiles. Taxicab business increased also because of more cabs in service. It is extremely unfortunate that in such a growing city mass transit riding did not increase in the two-year period, because we can only hope for general relief from traffic congestion by greater use of mass transportation. However, we do know that morning and evening rush hour riders of public transit at least held their own in numbers.

Existing Parking Facilities

We accumulated a maximum of 16,548 vehicles in the downtown area. Now where do we store that many units at one time? By virtue of our

***Traffic Engineer, Dallas, Texas.** **Paper presented at the Twenty-third Annual Short Course in Highway Engineering—A. & M. College of Texas, March 9, 1949.**

constant inventory of off-street and on-street parking facilities, it is estimated that approximately 2,000 units are constantly "on the move" and the balance of some 14½ thousand are stored.

In June of 1948, there were 130 parking lots and 32 garage buildings in the central business district. Storage capacity of all lots amounted to 8,128 spaces, and capacity of all garages was 5,752 cars, for a total of 13,880 off-street parking stalls. There was instantaneous capacity for 2,460 cars on all streets . Thus a total of 16,340 cars could actually be accommodated at one time. The overall load factor of off-street space was found to be approximately 85% and with street space practically one hundred per cent used we came out very close to the figure of maximum vehicles accumulated in the area.

How many vehicles actually park during the day? Of the 2,460 street parking spaces available all but approximately 4% were under time restriction ranging from 20 minutes to two hours. With good observation and enforcement the average turn-over space was found to be 8.5 cars per 12 hour day per space. Thus on-street storage in our cordon area accommodated 20,974 cars while off-street space, with a turn-over of approximately 1.25, accommodated 17,211 cars for a total of 38,185 vehicles throughout a twelve-hour day, roughly 30% of the city's total registered automobiles.

Certainly we are making good efficient usage of the storage facilities at hand. Especially is this true with respect to public space on the streets. Garages right now are obtaining better turn-over than a year or two ago by virtue of increases in parking rates. However, some of our most conveniently located parking lots and buildings are disappearing through the the processes of more intense land utilization.

I. Movement (Into and out of Central Business District)

Vehicles	1946	1948	Increase	% Increase
Private Automobiles	168,256	189,003	20,747	12.3
All Vehicles	222,493	256,291	33,798	15.2
Persons				
Private Auto Passengers	284,484	319,792	35,308	12.4
All Persons	650,365	700,966	50,601	7.8

II. Accumulation (Within Central Business District)

Vehicles	1946	1948	Increase	% Increase
Private Automobiles	12,610	15,729	3,119	24.7
All Vehicles	13,332	16,548	3,216	24.2
Persons				
Private Auto Passengers	28,599	35,258	6,659	23.3
All Persons	74,224	83,523	9,299	12.5

This gigantic fleet of mobile units was made up as follows:

Private passenger vehicles	74%
Taxicabs	3%
Service or commercial vehicles	20%
Mass transit units	3%

The Future Parking Problem

This brings us to a consideration of the future parking problem. Most certainly as our central business districts become more densely developed we will be faced with a critical situation. Huge traffic "generators" in the form of tall buildings are being built, creating new demands for parking space. All available street space will some day become necessary for the movement of traffic, thus eliminating that storage capacity which is most efficiently used and which in effect bears no fixed or operating charges.

There are several developments which may conceivably afford relief. There may be (1) a decentralization of business, (2) a major conversion to mass transport, (3) redevelopment of inner slum areas to attract housing, and (4) a logically planned provision of so-called "fringe" parking terminals. Unless one or more of these major relief movements takes place in a growing city the parking problem will become more acute year by year. It will not be solved by a lackadaisical attitude on the part of business interests and municipal authorities. Nor can we ever hope to provide sufficient parking space downtown for all who may wish to drive there. To do so would only be wishful thinking. However, the preservation of downtown property values unquestionably requires continued expansion of automobile storage facilities.

In Dallas, as in several other Texas cities, we are building an expressway, called Central Boulevard. A second one, fully as complex, is planned. What will be their effect? By virtue of free-way characteristics these facilities will entice many downtown employees to use their own private means of transportation who at present may be using public transportation. Instead of encouraging mass transit riding we are virtually working toward a diametrically opposite course, for there are no adequate provisions being made for public transit vehicles to use these expressway facilities in Dallas. Upon the completion of Central Boulevard we are faced with the gigantic problem of where we are going to store in the downtown area, the automobiles that will daily use that facility. We in the public service have been striving diligently to interest private enterprise in the vast monetary potentials now within its grasp in the parking business.

Solution Through "Fringe" Parking

I think you will agree that in a concentrated central business district, as is the case in downtown Dallas, there simply cannot be enough convenient space in the future for the number of automobiles driven there to be stored. What is more logical than to arrest these vehicles at the point where they must leave Central Boulevard free-way, store them where land values are comparatively low and transport the passengers by other means to and from downtown destination? The means of transport between the parking terminal and the central business district could be by public transit, a most efficient utilizer of street space. Buses on frequent headway and short haul may be operated profitably with an attractively low fare. Obviously if other parking terminals were made available at the opposite or west end of the business center in the vicinity of the railroad terminal or the river bottoms our residents of Oak Cliff

Winter Darkness Boosts Death Rate

Lacking adequate street lighting, northern cities have a mileage death 24 to 53 per cent higher during winter months than in summer, report traffic safety authorities.

working downtown could utilize them to advantage. By this arrangement the special bus service would be carrying two-way loads.

Naturally there is in anyone's mind a big question mark as to the public's acceptance of the so-called "fringe" type of parking. To drive one's car to a point adjacent to the central business district then disembark and ride a bus the remaining distance unquestionably has its drawbacks. On the other hand, negotiating that last half-mile with intolerable delay and the possibility of walking several blocks from garage or lot to office is also to be considered, especially when nearby parking space is at a premium.. Examples of failure of this type of development can be cited. In other cities, however, through proper "selling" campaigns and attractive services such projects have proved successful. Now is the time to act while land adjacent to Central Boulevard can yet be acquired at reasonable cost. A year hence commercial development of the area may result in prohibitive costs. If auto storage terminals are built there is still no assurance they will remain as such unless proper steps are taken to preserve the land use for that purpose so long as the need exists.

There is a school of thought, and this will be of special interest to you highway men, which advocates that provision of automobile terminals is a necessary adjunct to expressway construction; that a highway project is not complete, and cannot be fully utilized, unless storage facilities are furnished contiguous thereto. This viewpoint of course has its opponents as well as proponents. Let's look back a relatively few years when highway departments and agencies thought in terms of building Federal highways that would skirt the larger cities for the purpose of carrying inter-city traffic *around* congested centers. Then the planning surveys and O&D studies disclosed that the bulk of traffic crossing city lines was destined for the inner core of the city. As a result of this new knowledge entire concepts were changed. In order to justify the high cost of building these new facilities through highly developed areas they had to be made attractive to local work-a-day traffic. Subsequently the expressway into the downtown center was conceived. Now, say these proponents of publicly financed terminals, is it right for state and federal moneys to be poured into expressways while storage provisions are completely ignored?

The other school of thought says: "Let private enterprise solve the parking problem. Give it time and ample facilities will be provided." In this country, this is the right approach. But as I have said before, we public servants are in a position to view and study forthcoming projects, and when we can see a pattern developed, are obligated to point out to private enterprise the approaching needs. We must try to stimulate study and interest in anticipation of the need. In proper advance planning there results future economy.

(See PARKING, *page 381)*

2074 Towns in U. S. Lack Travel Service

Of the 6669 U. S. towns of 1000 or more population, 2074 have no local mass transportation and rely entirely on private vehicles.

Of the 4595 towns with one or more forms of mass transportation, 90 per cent, or 4156 towns, have only motor buses. A total of 4542 towns have motor buses, 346 have street cars, and 178 towns have trolley coaches. Only 39 towns lack busses.

A Year's Record

by B. A. SWITZER*

For a number of years the State of California maintained a three-lane highway between Colton and Ontario. This highway was a part of U. S. Highway 99 and U. S. 70. In addition to interstate traffic, it carried the agricultural products of the Imperial Valley (the hothouse of California) to the markets of the Los Angeles metropolitan area.

The heavy mixed passenger and truck traffic had frequent accidents. Many of these accidents were spectacular, with resulting fatalities which caused general public criticism.

The road consisted of two 10-foot lanes and one 11-foot lane. The shoulders were surfaced with oil mix for a width of eight feet on each side. The area outside the surface section varied from two to 18 feet. Most of the highway was through a rural area, but at two different centers, business deve'opment was taking place and some strip deve'opment had started.

The average daily traffic in 1941 was 7,225 and the accident rate per million vehicle miles was 1.91. The accident rate rose in 1946 to 2.87 per million vehicle miles. Truck volume amounted to 26.4% of the traffic. There were 16 fatal accidents in this same year (1946). During the war years there was an average of nine fatal accidents per year, even though traffic was generally restricted.

Freeway Planned

Shortly after the beginning of the war the federal government appropriated funds for a post-war construction program, the plans to be prepared during the war, and the projects let to contract following its close. In view of its traffic and accident record, the state proposed the improvement of this highway.

The original intent was to construct a parallel facility to provide a four-lane divided highway with limited access, or a full freeway with outer highways. Decision as to type of improvement was to be decided by traffic and economic studies.

Through the developed area from Colton to Etiwanda Avenue, investigation determined that right of way could be acquired adjacent to the railroal for a parallel road approximately 1,000 feet to the south of the existing road, and a new facility constructed at a cost much less than for widening the right of way and constructing on the existing grade. This would not only permit the construction of a parallel facility but would also permit the old highway to serve as a local distribution road. Through the undeveloped area from Etiwanda Avenue to Ontario, it was found best to use the existing pavement and build two new lanes for westbound traffic.

Construction of Freeway

With the close of the war, the war construction program was started. The portion of this highway on new location through the developed area extending from Mulberry Street near the Kaiser Steel Mill to Colton, a distance of 9.8 miles, was one of the first projects let to contract. The road was constructed as a limited freeway, but right of way for grade separations was obtained so that the road could ultimately be constructed to a full freeway by stage construction. Connections were made approximately one

*Mr. Switzer is Associate Highway Traffic Engineer, California Division of Highways.

mile apart. There are five grade crossings and connections and one separation in this first 9.8 miles. The separation is at Cedar Street in the town of Bloomington. This grade separation was effected by depressing the freeway through the community and constructing a crossing over the freeway at the grade of the intersecting street. Approach ramps were constructed in each direction.

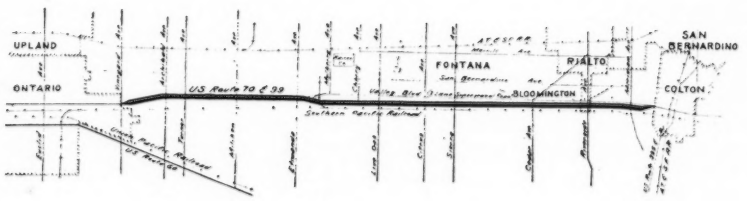
A right of way 208 feet wide was obtained. Construction consisted of a four-lane divided highway with two 12-foot cement concrete lanes in each direction with 3-foot surface shoulders on the inside and 8-foot surfaced shoulders on the outside. The median strip varies from a minimum of 12 feet at structures to a maximum of 86 feet from edge of pavement to edge of pavement. The design speed was 60 miles per hour.

A temporary connection was made at Colton by means of two 500-foot radius reverse curves connecting the existing road ("I" Street) to the new freeway at the west city limit of Colton.

A temporary connection 0.6 miles in length was constructed from Mulberry Street (the west end of the first contract) to the existing three-lane road in the vicinity of the Kaiser Spur. This connection had a minimum curve radius of 600 feet.

This section of freeway from Colton to the Kaiser Spur, with its temporary connections, was opened to traffic February 27, 1947. Total cost, including connections, was $1,461,000.

In April, 1946, a contract was let for a continuation of the project from Etiwanda Avenue to the east city limit of Ontario, a distance of 5.7 miles. The section between Etiwanda Avenue and Mulberry Street, a distance of 1.0 mile, was delayed pending settlement of negotiations with the Southern Pacific Railroad for an overpass at the Kaiser Spur, which connected with the Kaiser Steel Mill.



The project from Etiwanda Avenue to Ontario consisted of two 12-foot cement concrete lanes parallel to and 29 feet north of the existing three-lane pavement. It, like the first contract, was constructed with a 3-foot surfaced shoulder on the inside and an 8-foot surfaced shoulder on the outside. Four crossovers and connections were provided with provision for their future separation. At Etiwanda Avenue, provision was made for a future clover leaf. The design speed was 60 mph, the same as the first section. It was opened to traffic March 12, 1947. Total cost was $493,000.

In May, 1947, a contract was let to complete the freeway by constructing the section between Mulberry Street and Etiwanda Avenue. This called for a braided intersection to connect the old three-lane pavement to the new freeway and a grade crossing over a spur track to the Kaiser Steel Mill. This work was completed and opened to traffic on March 2, 1948. Total cost was $399,000.

Safety Increased

A check on the safety record of the road to date yields the following information: The permanent section of freeway between the temporary connections at Colton and at Mulberry Street has been open for a year and has had 30 accidents, including two fatalities. There have been six accidents at the temporary connection at the west city limit of Colton, and 15 accidents on the temporary connection at the Kaiser junction before it was eliminated.

Comparing the 9.7 miles of permanent freeway with the similar section of the old road, it has been found that there were 117 accidents, 10 of which involved fatalities on the old road during the year preceding the opening of the freeway. On the freeway for a similar period of time, there were 30 accidents, two of which involved fatalities. This is a reduction of 74%.

On the temporary connections, totaling less than one mile and which were in use approximately one year, there were 21 accidents or nearly as many as occurred on the 9.7 miles of freeway. The connections were on a much lower standard of construction than the freeway and the longer connection at Kaiser was eliminated as soon as possible.

Tables I, II and III give a comparative accident record of the old three-lane conventional road and the completed freeway.

Table I—Comparison of Accidents on the Freeway and the Superceded Three-Lane Highway for a Time Interval of 394 days

	Number of Accidents on Old Highway	Number of Accidents on Freeway	Percent Decreased	Percent Increased
Entire length of road, including temporary connections	154	74	52%	
Entire length of road, including temporary connections, fatal accidents	17	3	82%	
Accidents at Intersections, including temporary connections	53	21	60%	
Section of roal between Ontario and temporary connection at Kaiser, 5.46 miles	29	23	21%	
Section between temporary connections at Mulberry Avenue and Colton, 9.74 miles	117	30	74%	
On the temporary connection between the Kaiser Spur and Mulberry Avenue, .58 mi.	8	15		87%
On the temporary connection at Colton west city limit, .08 mi.	0	6		
On the freeway sections, 15.20 miles (exclusive of temporary connection at Kaiser Spur)	146	53	64%	
Fatal Accidents on 9.74 miles between temporary connections at Mulberry and Colton	10	2	80%	

Table II—Comparative analysis of accidents on Freeway for time interval of 394 days (exclusive of temporary connections) and superceded Three-lane highway

	Number of Accidents on Old Highway	Number of Accidents on Freeway	Percent Decrease	Percent Increase
One vehicle involved	13	16		23%
One vehicle involved, daylight	6	9		50%
One vehicle involved, dark	7	7	0%	
Two vehicles involved	116	37	68%	
Two vehicles involved, daylight	66	11	83%	
Two vehicles involved, dark	50	26	48%	
Pedestrians involved	17	0	100%	
Pedestrians involved, daylight	3	0	100%	
Pedestrians involved, dark	14	0	100%	
Fatal accidents	15	3	80%	
Fatal accidents, daylight	8	3	62%	
Fatal accidents, dark	7	0	100%	
Non-fatal injury accidents	88	33	63%	
Non-fatal injury accidents, daylight	40	11	73%	
Non-fatal injury accidents, dark	48	22	54%	
Property damage only	43	17	60%	
Property damage only, daylight	27	6	78%	
Property damage only, dark	16	11	31%	
All daylight accidents	75	20	73%	
All accidents at night	71	33	54%	

(See RECORD, *page 382)*

Tax Increase Proposed In Nebraska, Illinois

In a special message to the *Nebraska* legislature, Gov. Val Peterson recommended a 1-cent gasoline tax increase and an increase in motor vehicle registration fees. The Highway Advisory Committee previously has recommended increasing passenger car fees to $10. The present rates are $3 for cars under 2400 pounds weight and $5 for those over 2400 pounds. The Governor also recommended that the State Highway system be limited to 10,000 miles and that the Highway Department be directed by the legislature to reclassify the present state system. He proposes that the state construct and maintain all streets in towns of 5,000 or less population which are a part of the state highway system. In towns of over 5,000, he asked that the state be made responsible for 50 percent of construction and 50 percent of maintenance cost.

The *Illinois* Highway Commission has recommended that the gasoline tax be increased from 3 to 5 cents. It also debated proposals for redistribution of gasoline tax revenues but did not reach agreement. The 5-cent gasoline tax was also asked by the Griffenhagen state highway study.

Michigan Safety Conference Sponsors Course In Traffic Engineering

This year, instead of the usual papers and panels, the Traffic Engineering Division of the Michigan Safety Conference has arranged for an intensive course of instruction on traffic engineering fundamentals. The program will be held at the Book Cadillac Hotel, Detroit, on May 19 and 20.

T. M. Matson, director, and Wilbur S. Smith, associate director of the Yale Bureau of Highway Traffic, will serve as course instructors. They will treat the subject from the practical approach, not the theoretical one, and will allow ample time for discussion of rural and urban traffic problems.

The unique course promises to have wide appeal, not only to practicing traffic engineers, but to highway engineers, city engineers, fleet supervisors, police, teachers, and city officials as well, according to A. F. Malo, general chairman of the Conference's Traffic Engineering Division. All interested persons are urged to attend by Mr. Malo.

The course outline for the two-day program is given below:

THURSDAY—May 19, 1949
Book Cadillac Hotel
Reception Room, Fourth Floor
Chairman: A. F. Malo,
City Traffic Engineer, Detroit

10:00 A.M. *Traffic Signals*
Traffic facts required—Visibility, Accidents and Congestion, Use at Schools and Industrial Plants, Pedestrians, Speed, Special Applications, Advantages and Disadvantages of Various Types of Installations.

2:00 P.M. *Signs*
Uniformity—Target Value, Placement, Need, Over Signing or Under Signing, Legibility, Four-Way Stops, Reflectorization and Illumination, Size, Special Applications.

3:00 P.M. *Pavement Markings*
Center Lines, Lane Lines, Barrier Lines, Crosswalks, Word Messages on Pavement, School Zones, Permanent Marking, Marking Materials, Reflectorization.

4:00 P.M. *Questions and Discussion*
This period will be used to review material covered during the day. If you have some problems on which you would like help, bring them up for discussion.

FRIDAY—May 20, 1949
Book Cadillac Hotel
Pan American Room, Fifth Floor
Chairman: J. Carl McMonagle,
Director, Planning and Traffic Division,
Michigan State Highway Department

10:00 A.M. *Increasing Roadway Capacity*
Widening, Shoulders, Signal Timing, Laning, One Way Regulations, Truck Routes, Pedestrian Interference, Snow and Ice Control, Parking.

11:00 A.M. *Channelization For Pedestrians and Vehicles*
Intersection Design, Safety Zones, Continuous Dividing Islands, Footpaths, Height of Islands, Illumination or Reflectorization, Design.

2:00 P.M. *Parking*
Zoning, Curb, Parallel, Angle, Time Limits, Meters, Accidents, Parking Lots, Walking Distance, Surfacing and Lay-out of Lots, Apportionment of Costs.

4:00 P.M. *Questions and Discussion*
This period will be used for final review and discussion of problems.

Throughout the course of instruction reference will be made to standards of design and practice as incorporated in the 1948 edition of the Manual on Uniform Traffic Control Devices.

Urban Planning

Ed. Note: Mr. Lewis' work was reviewed for "Traffic Engineering" by Associate Editor J. A. Carrothers.

Traffic engineers with even a moderate interest in city planning will find a recently published work, "Planning the Modern City", by Harold MacLean Lewis to be worthwhile reading and a valuable reference. Mr. Lewis, in this two-volume work, gives the engineer's approach to city planning problems without the usual emphasis on aesthetics.

The relation of planning and traffic is brought out in concise manner; subjects of port development, terminals, street systems and transit operation are presented from an engineering viewpoint. The work is based on an original book published in 1916 by the author's father, Mr. Nelson P. Lewis.

Included in the subjects presented are:

Decentralization vs. concentration.
Problems of industrial areas.
Economic value of a city plan.
Financing a city plan.
Special assessments.
Excess condemnation.
The opportunities and responsibilities of the civil engineer.
The airport and the city plan.
Transportation and port developments.
The local transit system.
The street pattern.
Street traffic and design.

The author is a consulting engineer specializing in city planning and zoning. He was formerly a member of the Mayor's Committee on City Planning for New York City and consulting engineer in the office of the President of the Borough of Manhattan. Recently he has acted as consultant to the Interim Committee on Headquarters for the United Nations.

For a number of years he engaged in consulting work with the National Research Planning Board as well as acting as consultant to over twenty municipalities of various sizes throughout the country. Mr. Lewis is a former director of the American Society of Civil Engineers and has been Chairman of its City Planning Division and President of its Metropolitan Section. He is also a past president of the American Institute of Planners.

Mr. Lewis' career in engineering and planning began in 1912. His treatment of the 'science' of city planning shows the growing importance of traffic which transpired in the years of his interest in city development. The approach to city planning as a practical engineering problem shows the result of careful study and points the way for a broader outlook by engineers.

The two volumes, each about 250 pages, are profusely illustrated with photographs and engineer's plans and drawings to emphasize the points in the text. Available from John Wiley & Sons, Inc., 440 Fourth Avenue, New York City.

Atlanta's Traffic Blitz

Atlanta, Georgia, is undergoing a sort of one-woman reconstruction period. If Margaret Shannon of THE ATLANTA JOURNAL wins, the streets will be safe, not only for the homefolk, but perhaps even for touring Yankees.

Margaret, supported by a battery of journal photographers, took on the entire motoring public, the police department, the traffic judge and the plutocrats of parking.

So far, she's winning hands down!

Like many other cities, postwar Atlanta found itself with thousands of

new people and an ever increasing stream of automobiles flooding its non-elastic streets.

Last October, Margaret began a series of stories as a simple study of the city traffic snarls but soon branched out to hammer away at careless drivers.

Capt. Marvin Thomas, head of the Traffic Bureau of the Atlanta Police Department, became Margaret's ally. Together they worked out a three-month safe driving campaign.

Irked by cars parked—sometimes legally, sometimes not—on busy streets, Margaret pointed out ways to smooth the homeward path for weary drivers.

Since the series began, parking has been eliminated on 10 major streets in the downtown area and banned on four others during rush hours. Three parking garages have been started and three new parking lots will be opened.

One article spotlighted the number of drunk drivers who walk out of court with their driving licenses still in their pockets and repeated violators who went unsentenced.

Following that story, the traffic recorder sent three drivers to the city stockade for several months.

He also announced that he had a bill pending in the legislature which would set up a traffic commission, and allow him to add another recorder to hear cases and an engineer to standardize Atlanta's traffic controls.

Philadelphia's First Expressway Approved

Mayor Bernard Samuel has announced that he has received the City Planning Commission's annual report for 1948 from Edward Hopkinson, Jr., Chairman of the Commission.

The report, the mayor said, records progress in plans for highways, recreation, redevelopment and other projects.

It also noted the approval obtained from state and city agencies for the Schuylkill Expressway along the west side of the Schuylkill River from University Avenue northward, connecting with an extension of the Pennsylvania Turnpike.

Commenting on this aspect, Mr. Hopkinson said, "Now that the Commission's plan has been accepted, necessary engineering drawings which have been started will continue at high priority, so that all speed possible can be given to providing Philadelphia with its first expressway."

Three out of five motor vehicle accidents occur at night. Heavy traffic and poor visibility during the early hours of darkness account for a large share of this increase.

CORRECTION PLEASE

The following table with its title should be substituted for the table on the top of page 209 (I.B.M. Analysis), February issue of Traffic Engineering:

Master Deck "A" (Spread)

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Street Management Report For L. A.

(Continued from page 350, April issue)

All work concerning the movement of traffic would be the function of the Traffic Engineering Department. This would include:

Collection, analysis and interpretation of factual data gathered in technical studies to measure present and future needs.

Planning and projects relating to location, function and operation of routes and terminals and to other operational functions, using not only the data required in its own department studies but also pertinent facts available through other agencies.

Research covering driver and pedestrian characteristics, equipment development and other subjects toward the improvement of traffic management.

Review of design for facilities dealing with traffic movement and safety proposals for channelization and redesign of intersections.

Installation, operation and maintenance of traffic control devices.

Review of all requests for driveways, curb cuts, cab stands, loading zones and other matters relating to safety and efficiency of street use, prior to issuance of permits.

Cooperation in traffic safety education; cooperation with other city departments in the use of traffic data, and close cooperation, through the Technical Coordinating Committee, with other city agencies whose secondary functions overlap or affect functions of the Traffic Engineering Department.

To obtain maximum efficiency in operation, the report proposes that the Traffic Engineering Department have a central and four district offices, with the central office supervising and coordinating the work of the districts.

"Selection of the director of the Traffic Engineering Department, of department head status and compensation, is one of the greatest responsibilities confronting the Traffic Commission," the report says. "Civil service requirements should be adhered to rigidly. The person appointed to this extremely responsible position must be a capable, energetic leader, as well as thoroughly technically qualified."

The report suggests that perhaps there is a sufficient number of employees in the sign, signal and marking crews to carry on the work program under the new streamlined structure. "The recommended organization calls for a considerable increase of professional and semi-professional men over those now employed," according to the report, "yet the total employment and the salary budget need be little if any greater than that of today."

"The most urgent need is for expansion of the engineering staff to conduct fact gathering, warrant and standard determination, planning and programming."

A suggested minimum table of organization for the department, lists 47 professional and semi-professional positions; 123 in the skilled, semi-skilled and unskilled classifications, and 29 clerical and stenographic positions. Job descriptions and qualifications also are detailed.

The department's probable annual operating budget for the next few years under the new structure would total about $1,575,000, of which $650,000 would represent salaries and wages, $500,000 for signals and channelizing and the balance for miscellaneous materials and supplies.

This estimate of total operating budget under the new organizational structure is compared in the report with the 1948-49 budget of $1,328,-200 for the Bureau of Street Traffic Engineering. The Bureau's budget figure did not include estimates for new traffic control equipment.

"The element of cost is not a serious one in modernizing traffic administration in Los Angeles," the report asserts. "Although technical staff is greatly expanded, economies are produced by the more efficient operations that go with a district office set-up and with adoption of a fixed, efficient program. The cost of the recommended program amounts to less than $1 per capita, and only about $2 per motor vehicle registered in the city."

Presented in seven chapters and illustrated by photographs, charts and maps, the Traffic Survey Committee's report reviews the growth and development of Los Angeles from a population of about 100,000 in 1900 to its present position among the large cities of the world. This growth into a huge and sprawling metropolis is traced in the progress of modern transportation, upon which Los Angeles has become completely dependent in all phases of its economic and social welfare. Safe and efficient movement of traffic over Los Angeles streets, the report declares, is essential to continued growth and prosperity.

New facilities, including "express highways and improved mass transit, and much more off-street parking space" are classed among the city's needs. "But, modern roadway or old streets, traffic facilities must be made to do a better job. They must be fitted to meet today's pressing needs and the certain greater demands of tomorrow. This can be done through efficient traffic management, control and planning.

The history and growth of Los Angeles' traffic problem is covered in the report in such terms as growth of population, area and motor vehicle registration. Congestion, mass transit, parking and traffic accidents are discussed along with other factors, such as natural barriers to a free circulation of traffic. These barriers, including the mountains, hills, a river and the ocean, the report points out, "have not been a serious handicap to growth of the city, but have tended to guide land use and to make solution of the traffic problems more difficult."

"Adequate management and control of traffic," the report continues, "requires close cooperation with the several departments of city government whose work naturally involves traffic. Of particular urgency is close cooperation with city planning and zoning agencies."

Following a discussion of the elements of the city's traffic problem, the report studies the present duties and functions of government agencies concerned with traffic, detailing the structure which fosters overlapping of fields of interest and authority. The role of non-government agencies also is discussed.

The essential traffic management functions are given exhaustive treatment in two sections dealing with traffic operation and traffic planning and research. The closing chapter is devoted to findings of the traffic survey, desirable objectives in traffic improvement and the detailed recommendations for remedial action.

Three out of every four pedestrians killed by a motor vehicle are either violating a traffic law or taking unnecessary chances. Crossing in the middle of the block in cities, and walking on the wrong side of the road in rural areas are listed as particularly dangerous.

Reference Notes

by C. G. GILES, ESQ.,B.SC., of the Road Research Laboratory Dept. of Scientific and Industrial Research (England).

RESULTS OF SKIDDING TESTS ON WET SURFACES OF VARIOUS TYPES

Type of Surface	Number of Tests	"Stopping Distance" from 30 m.p.h.* Lowest value recorded	Highest value recorded
1. MACADAM			
Bitumen binder	more than 500	31 feet	115 feet
Tar binder	more than 200	35 feet	100 feet
2. DENSE SURFACINGS			
Hot rolled asphalt with pre-coated chippings	50	38 feet	105 feet
Hot rolled asphalt, without pre-coated chippings but with stone in mix	more than 40	36 feet	87 feet
Dense tar surfacing	60	32 feet	64 feet
Fine textured asphalt	more than 80	31 feet	240 feet
Mastic asphalt without pre-coated chippings	4	63 feet	122 feet
Rock asphalt without pre-coated chippings	10	61 feet	495 feet
Rock asphalt with pre-coated chippings	4	44 feet	59 feet
3. SURFACE DRESSINGS			
Gravel	7	37 feet	53 feet
Crushed rock	60	32 feet	50 feet

*Deduced from curves of Sideway Force Coefficient against Speed.

CONCLUSION. It thus appears that from the point of view of skidding resistance and visibility, coarse-textured surfaces are generally to be preferred. Such surfaces may give rise to slightly greater tire wear than others, but the difference is small, and is not thought to outweigh their other advantages from the road users point of view.

Supplement to "Coated Macadam" published June, 1948. Highway Research Abstracts, February, 1949.

The total vehicular travel into St. Paul's business district, bounded by Kellogg, Broadway, Tenth and Smith Avenues, in one day is about 96,000. In Pittsburgh the total vehicular travel into the business center is 28,000 in one day. St. Paul has a population of 350,000; Pittsburgh has a population of 700,000. Obviously, there are more vehicles entering St. Paul's business district than is necessary. Many of these vehicles may be roving cars—just driving around.

Developments on State Highway Planning

Gov. Forrest Smith of *Missouri* has appointed a sixteen-man highway study committee. Lloyd C. Stark, former Governor and Manager of the 1928 Road Bond Campaign, accepted the appointment as Chairman. No representative of highway users was named to the committee.

Annual Cash Award For Best Example of "Getting Results Through Traffic Engineering"

To further stimulate the life-saving exchange of traffic engineering ideas among cities throughout the nation, an annual cash award has just been announced by Julien H. Harvey, manager, Accident Prevention Department, Association of Casualty and Surety Companies, New York City, for the "best example" of a traffic engineering project that has effectively reduced accidents or congestion. Announcement of the $100 award has been mailed to the more than 2,000 traffic officials in this country who regularly receive the department's bulletin "Getting Results Through Traffic Engineering" as well as to the membership of the *Institute of Traffic Engineers* and other interested professional groups.

"Getting Results Through Traffic Engineering" Mr. Harvey said, has been published periodically for over ten years, serving as a valuable trading post of ideas for solving traffic problems and containing in each issue an actual example of reduction of street and highway traffic accidents and congestion as submitted by engineers and traffic officials. The award is being offered by the Association to encourage a still greater number of engineers, police and traffic officials to write in about their successful projects and so share with other municipalities the techniques which have proved effective in saving lives and reducing property damage.

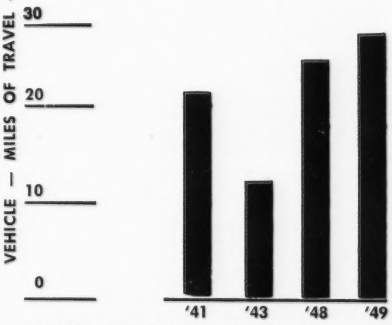
In explaining eligibility requirements for the award, Mr. Harvey particularly emphasized that it will be given for the outstanding example and not the outstanding traffic engineer of the year. The person receiving the award will be selected solely on the basis of the quality of his submitted project. It was also pointed out that all traffic officials and not just engineers are being asked to submit illustrations of effective traffic engineering.

Further details of the award are as follows:

Projects Eligible: Any project or program wherein traffic engineering techniques, control devices or measures are used to effect a reduction in traffic accident occurrence or congestion.

Persons Eligible: Any person directly connected with the traffic engineering project submitted as an entry.

Traffic Trends



TRAVEL ON RURAL ROADS FOR FIRST TWO MONTHS OF 1941, 1943, 1948 AND 1949.

Based on Public Roads Administration Data

Form: Material submitted will be prepared for publication by the Traffic Engineering Section of the Association's Accident Prevention Department. Included should be a statement of the problem, any studies made, the solution, accident and/or congestion facts for a comparable period "before" and "after" the improvement, costs of the improvement when possible, and any other data concerning the effect of the improvement. Photographs and sketches are very desirable.

Scope: Example showing the benefits of a *single* traffic control device or traffic engineering measure are preferred. Where many different improvements are made simultaneously, the value of any one improvement cannot be accurately measured.

Selection: The best example will be graded on the following factors: effectiveness in reducing accidents and congestion, adequacy of factual data and illustrative material, originality with respect to previously published examples, survey methods used, relationship of benefits to cost.

The $100 award will be presented for the best example published in any calendar year, with the winner announced on each February 1st after deliberation by a competent board of judges. Mr. Harvey invited all officials interested in learning how their contemporaries are solving traffic "headaches" to request the free bulletin service "Getting Results Through Traffic Engineering" and to enter the competition for the cash award. Requests may be addressed to: Accident Prevention Department, Association of Casualty and Surety Companies, 60 John Street, New York 7, New York.

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(PARKING, *cont'd from page 368)*

Conclusion

Let me summarize briefly my viewpoints on this parking problem which might be applied to any of our rapidly growing cities in the higher population brackets. There will be an ever increasing demand for parking capacity in the central business district unless certain changes take place to afford relief. Two of these are decentralization of business and a major conversion to new transit. Re-development of inner slum areas may offer some measure of relief. Outside of these possibilities the solution lies in well-planned parking projects engineered to a successful conclusion as the demand justifies. It is not a problem for public officials only to bear but private enterprise as well. It is a joint problem. Private business must be made to recognize the need for a solution, must entirely finance facilities or secure approval for public financing. Use of the land for that purpose must be perpetuated. Parking facilities should logically be spread throughout an area to avoid heavy concentration of traffic. However, where an expressway passes adjacent to the business center, major parking terminals contiguous to it with convenient bus service will do much to preserve downtown values and relieve street traffic congestion with the lowest possible cost.

Distribution in printed form of the 1948 Beecroft Memorial Lecture presented before the Society of Automotive Engineers by Public Roads Commissioner Thomas H. MacDonald is being made by the S.A.E.

Miami May Build City Hall With Stores, Car Parking

Miami may be the first major city in the United States with a revenue-producing city hall if city officials approve plans put forward by architects and department heads for a new-type municipal building.

Forced to move from their present offices in the county building within the next 18 months, city officials are exploring all possibilities for a new municipal building located in the downtown area of the city. Building the city hall in the business district would dovetail smoothly into proposed plans for an income producing structure.

The "new-look" municipal building as envisaged by some city councilmen and architects would contain stores on the ground floor and municipal offices on upper floors. The entrance to the city hall proper would resemble a hotel lobby with an information desk near the elevators.

Another revenue-producing plan has been suggested for at least two or possibly three of the upper floors—that they be designed to park automobiles at a small fee. Then, at a later date these rough-finished floors could readily be put in use as office space, as necessity requires. Cars would reach the upper floors by ramps which could be eliminated and the opening sealed as fast as the city took over these floors for offices.

City officials do not believe that they would be placed in the position of competing with local retailers, as merchants would have an opportunity to bid on the store locations. Then too, a revenue-producing city hall would save all taxpayers, including the merchants, a possible increase in tax bills.

(RECORD, *cont'd from page 372)*

Summary

In Table I is presented a comparison between the accident record of the new freeway from its opening to traffic, to March 30, 1948 and for a similar period of time on the old highway before the freeway was in use.

Twenty-eight per cent of the accidents on the total length between Ontario and Colton occurred on the two short temporary connections. If the record of the temporary connections is eliminated, there is a reduction in accidents on the freeway amounting to 64%.

Table III—Comparison of Accident Record per Million Vehicle Miles on the Freeway and the Superceded Three-lane Road

	Accidents with			Accidents Involving			
	Fatalities	Personal Injuries	Property Damage Only	One Vehicle	Two Vehicles	Pedestrians	Total
Three-lane road: 15.88 miles 5 yrs. 1941 - 45 Avg. Daily Veh. = 6403							
Avg. accidents per year	9	38	21	11	51	6	68
Accidents per M.V.M.	.24	1.02	.57	.30	1.37	.16	1.83
Three-lane road: 15.88 miles 427 days—1946 - 47 Avg. Daily Veh. = 8797							
Number of accidents	20	103	47	22	130	18	170
Accidents per M.V.M.	.33	1.73	.79	.37	2.18	.30	2.85
Freeway, 15.20 miles 394 days—1947 - 1948 Avg. Daily Veh. = 7165							
Number of accidents	3	33	17	16	37	0	53
Accidents per M.V.M.	.07	.77	.40	.38	.86	.00	1.24
Percentage of decrease on freeway compared to superceded three-lane road							
1941 - 1946	71%	25%	30%	—27%	37%	100%	32%
1946 - 1947	79%	56%	49%	—3%	61%	100%	57%

Considering the total length from the east city limit of Ontario to the west city limit of Colton, the accidents were reduced from 154 on the Old Valley Boulevard to 75 on the freeway, which represents a decrease of 52%. Fatal accidents were reduced from 17 to 3, which amounts to 82%. The reduction in intersection accidents amounted to 60%. Accidents involving pedestrians have been entirely eliminated.

In Table II comparisons are made of 15.2 miles of Freeway exclusive of the temporary connections and a similar mileage on the old road. Daylight accidents have decreased to a greater extent than night accidents. Collisions in daylight involving two or more vehicles have been decreased by 83%. Daylight accidents involving property damage only have decreased by 78%.

Table III includes computations of accident rates per million vehicle miles.

ITE NEWS AND PERSONALS

Annual Meeting Progress

The Local Arrangements Committee, with the approval of the Technical Sessions group, has tentatively established a "timetable" of events for the next annual meeting as follows:

SUNDAY, SEPTEMBER 25

12:00 noon Board of Direction Meeting
Business Meeting of Standing Committees (Upon call of Chairman)
4:00 P.M. Annual Business Meeting
6:30 P.M. ITE Headquarters (Bull Fight) Room

MONDAY, SEPTEMBER 26

8:00 A.M. Biscuit Banter Breakfast (Conducted under the auspices of Resolutions Committee, W. E. "Skinny" De Young, Chairman)
9:45 A.M. Technical Session No. 1
2:00 P.M. Technical Session No. 2
5:00 P.M. ITE Headquarters Room

TUESDAY, SEPTEMBER 27

9:45 A.M. Technical Session No. 3
2:00 P.M. Technical Session No. 4
6:00 P.M. Reception
7:00 P.M. Annual Dinner (Buffet style)

WEDNESDAY, SEPTEMBER 28

9:45 A.M. Technical Session No. 5
2:00 P.M. Field Trip

Plans are also formulated for special events for the ladies. Watch for further announcements.

Secretary's Column

It is certainly inspirational to receive so many congratulatory letters and notes from members commenting on our recent newsletter and the current Yearbook. Your Headquarters staff makes every effort to serve the *Institute* to the best interests of its members. We are pleased to learn that you like the new Yearbook and that you endorse the action taken by the Board on TRAFFIC ENGINEERING magazine and other matters. Our sincere thanks for your well-wishes, which provides us with additional incentive to maintain the pace set by our program of expansion.

The ITE membership growth chart reproduced in this issue is clearly indicative of the results of our current expansion program. It further provides an insight into the future of the traffic engineering profession. In fact, if the normal growth line was extended for a 20-year period to—say, 1970, you will find that we will have reached the peak of expansion as outlined in some detail in this column in the February, 1949 issue. We can set a faster pace if we continue to seek out qualified engineers who may be interested in affiliation with ITE. Judging from the number of requests for application forms (approximately 200 per year), and the relatively small (approximately 20%) return, there are apparently many prospective members who can't seem to find the necessary 30 to 60 minutes time needed to complete the forms and return them

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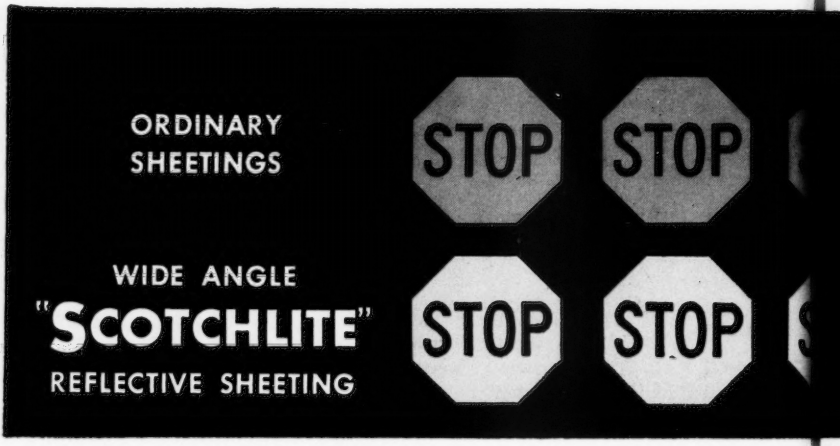

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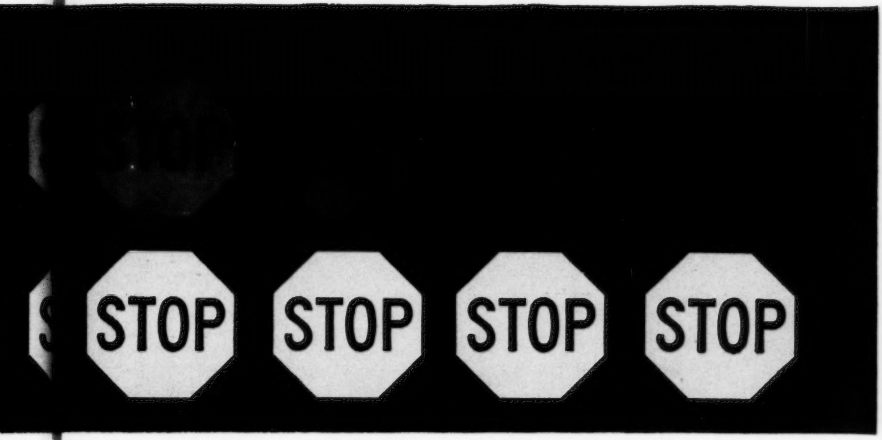

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to national headquarters. Despite this unfortunate attitude on the part of many interested engineers, our membership is increasing more rapidly than in any previous period since the founding of the organization. Members can help those engineers "on the fence" by providing some guidance in completing their membership application.

Winners of the first ITE engineering achievement awards are reported in this issue. It is interesting to note that all winning cities and states have authorized traffic engineers, a majority of whom are members of the Institute. We hope the incentive provided through this annual award will create a healthy competitive spirit among traffic engineers and bring increased prestige and recognition to the traffic engineering profession.

—Robert S. Holmes

PERSONAL ITEMS

EDMUND RICKER, recent transfer to full member status, aroused considerable discussion at annual meeting of Connecticut Society of Civil Engineers, as a result of an interesting paper on one-way streets. Incidentally, **ED** and **FRED HURD** have been licensed as professional engineers by the Connecticut State Board of Examiners. . . . **JIM HAYDEN** looking for a German linguist who is also an authority on motor vehicle safety. Jim may soon be assigned responsibility for bringing German antiquated traffic laws up to date and standardizing signing practices. . . . **MATT SIELSKI** and **GEORGE BARTON** undertaking extensive study on one-way streets as a basis for a publication on the subject. Copies of his report on Parking Meters mailed to all ITE members by **MATT.** . . . Don't miss the Traffic and Transportation Safety Panel in **March** issue of "Public Safety" magazine. Seventeen prominent ITE members, headed by President **MITCHELL,** immediate past- president **SEBURN,** and ITE director **REEDER,** discuss the important question "Should 'superhighways' lead directly to the central business areas of large cities, or by-pass them? . . . **BERNIE HARTUNG** still spreading his wings—has more jobs than "Carter has oats"—next we'll hear he's Governor of Nevada. . . . Printed copies of reports reflecting their work flooding ITE archives from **JOHN MILLS, LAWRENCE WATERBURY, OTTO JELINEK, WALTER PARKER, MASON BUTCHER, AL HEAD** and **BRUCE CRANDALL. HANK BARNES** spending an afternoon "sweating it out" on a tour of inspection with a local newspaper reporter who was apparently screening the Department budget with a "jaundiced" eye. . . . "Captain **JACK" HOOVER** suddenly taken ill and forced to take four months leave of absence—heading for the southwest to recuperate. . . . Watch for a strong bid for the 1950 annual meeting from **TOM WILLIER** and the Texas gang. Could this have anything to do with the recent opening of a "super" hotel in Houston? . . . **TONY CARROTHERS** delighted with his new job in Schenectady. . . . **GEORGE HOWIE** moving his reorganized Cincinnati Department to spacious and attractive quarters on Lincoln Park Drive. . . . Spring lecturers for current class enrolled at Yale Bureau of Highway Traffic include **GRANT MICKLE, LARRY TUTTLE, BOB MITCHELL, "CY" VEY, TED HOLMES, NAT CHERNIACK, BURT MARSH, MER KRAFT, DWIGHT McCRACKEN, JACK ECKER, GORDON GRAVELLE, DON KENNEDY, EARL CAMPBELL,** and **KIRK REID.**

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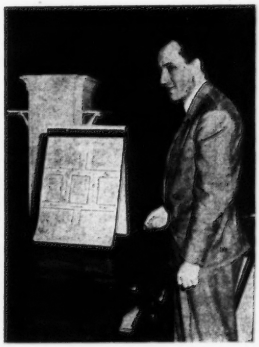
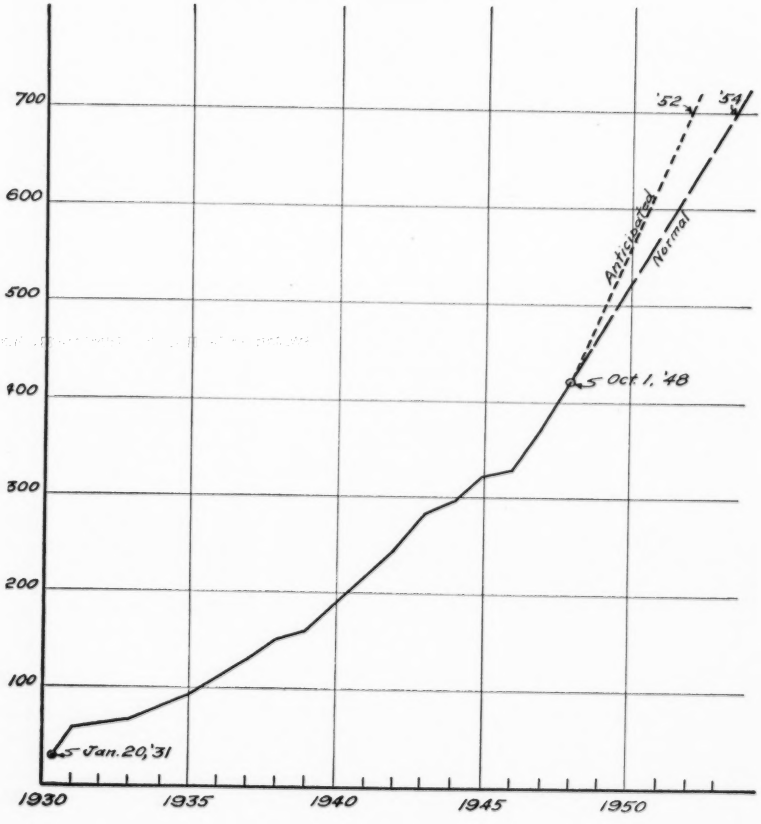


At the first Traffic Engineering group sessions of the Southern Safety Conference, the roving cameraman focused upon: (1) President Mitchell, presiding, and speakers, left to right, George B. Collins, President, Collins Transfer and Terminal Corp., Miami, and Hadley B. Cammack, Vice-President and General Manager, Savannah Transit Company, at opening session Monday afternoon, March 7; (2) Edmund Friedman, standing, leading an all-ITE panel on "What can we do about parking?"—from left to right, Grant Mickle, Charles LeCraw, Friedman, Bob Grunow and Harry Porter; (3) A panel of "experts" prepared to take on all comers in a free-for-all discussion of "Traffic Engineering Problems in Southern States"—from left, Prof. "Mike" Flanakin, L.S.U., Prof. L. J. Ritter, University of Florida, Arthur White (Mississippi), George Papageorge and Stewart Derrick (Georgia) and Walter Gottschalk of Miami; (4) Karl Bevins illustrates a point in the presentation of his paper on one-way streets.

I.T.E. Membership Growth



This chart clearly shows the accelerated growth of the Institute since the current program of expansion was initiated in 1946. It is indicative of the progress being made by the traffic engineering profession. The current goal of 700 members should be reached in the next three years if the present rate of increase is maintained.

New Appointments . . .

FOREST H. GREEN, Research Engineer, School of Civil Engineering, Purdue University, has obtained a one-year leave of absence to join the staff of the Institute of Transportation and Traffic Engineering at the University of California. His official capacity on the new assignment is Visiting Associate Professor of Highway Engineering and Research Engineer. He will be responsible for development of policy and program in traffic operations research, and supervision of the initial projects. He will also be responsible for some instruction in traffic engineering, including guidance of special studies by graduate students. Forest is a graduate of Purdue, and received his Master of Science in Civil Engineering in 1947. He worked with the State Highway Commission of Indiana for twelve years as Project Engineer and Assistant Superintendent of Maintenance. He has been connected with Purdue for the past four years. In addition to his affiliation with ITE, he is a member of ASCE and the American Society for Engineering Education.

The above photo, taken at a recent meeting of the New York Metropolitan Section, shows the key traffic engineering "team" now heading up New York City's new Dept. of Traffic Engineering. Director "Teke" Wiley (center) is flanked by John T. Gibala (left) and Charles C. Michalski (right). Mr. Gibala, traffic engineer, and second in command of the Engineering Bureau of the New York Police Department, moved up to his new assignment as Director of Traffic Control. Mr. Michalski, Director of Planning and Research, was formerly with the Detroit Traffic Engineering Bureau.

Southern Safety Conference Highlights

As reported in the January issue of TRAFFIC ENGINEERING (p. 172), the Southern Safety Conference, for the first time in its history, included traffic engineering group sessions. Despite the tremendous travel distances involved in reaching Tampa from a majority of the southern states, an excellent representative group of 30 traffic engineers was on hand to participate in the discussions. Ten of the fourteen southern states included in the Conference were represented at these sessions. Members of the Institute's Board of Direction increased official representation to fourteen states and the District of Columbia. EARL J. REEDER, as official Traffic Engineering Section chairman for the Conference, had previously prepared a very interesting and practical series of papers and panel discussions.

Transit Planning

PRESIDENT MITCHELL opened the first group session on March 7th as presiding chairman. Leading off with the first technical paper, HADLEY B. CAMMACK presented an interesting review of "Transit Planning and Regulation for Traffic Improvement". Mr. Cammack briefly reviewed the "non-planning" past when factories, schools, churches, shopping centers, etc., were located without any consideration to difficulties that may be encountered by the local transit company in adjusting routes and schedules to provide adequate transportation to the new facility. He then cited the present-day traffic and transit planning as a *coordinated* effort of transit officials and traffic engineers, enhanced by the greater flexibility of buses as the chief means of public transportation. He called upon his personal experience to provide examples of successful transit planning.

Truck Routes in Urban Areas

Mr. Cammack was followed by George B. Collins, President, Collins Transport and Terminal Corporation of Miami, who delivered an interesting talk on truck routes in urban areas. He pointed out the extremely difficult problems encountered by the trucking industry in negotiating existing urban streets with large carriers. He stressed the need for designing urban expressways for use by *all* types of vehicles as a means of alleviating the problem. Mr. Collins quoted a resolution adopted at the recent annual meeting of the U. S. Chamber of Commerce concerning the regulation and prohibition of curb parking to provide adequate loading and unloading space for passengers and freight. He favored off-street parking development as one means of providing this curb space. Other measures urged by Mr. Collins to facilitate trucking operations in urban areas included: (1) a reversible one-way system, or provision of additional lanes for inbound and outbound traffic during peak hours: (2) elimination of left hand turns; and (3) better planning of truck routes for over-the-road carriers by-passing urban centers.

The session closed with an informal and highly instructive panel discussion entitled "What Can We Do About Parking?" led by moderator EDMUND FRIEDMAN with free participation by the audience. Important phases of the parking problem dealing with financing off-street facilities, zoning regulations, curb parking control and other measures were discussed by Friedman's "high-powered" panel of parking authorities pictured elsewhere in this issue.

Signalizing Rural Intersections

Earl Reeder acted as presiding chairman for the Tuesday afternoon session and introduced ITE Vice-President

HARRY E. NEAL as the first speaker. Neal spoke on the rural traffic control signal problem at isolated intersections. He stressed the salient differences between traffic conditions on rural highways and those in urban areas; i.e., higher speeds and lower volumes in the rural areas vs. higher volumes and lower speeds in urban areas. Due to higher speeds, distance visibility of the traffic signal unit itself becomes an important factor in rural installation, Neal said. He then outlined the elements of practical rural installations; e.g., 1000-foot sight distances, color of the signal housing (target value), capacity and intensity of the lamps, mounting heights, and the need in many cases for two signal faces. Neal also emphasized the need for thorough study of roadway and traffic conditions prior to installation and the advantages and disadvantages of fixed-time vs. traffic-actuated control.

One-Way Streets

Mr. Neal was followed by KARL A. BEVINS who delivered an informative well-illustrated paper on "Facilitating Traffic Flow with One-Way Streets." Bevins key-noted his talk when he stated that "One-way streets, *properly used* can literally work wonders in many of our cities with little or no change in the existing street system." To illustrate this point, Bevins discussed in some detail the advantages and some of the inherent "disadvantages" of a one-way system. He then presented to the audience some interesting diagrams showing traffic improvement through "properly used" one-way operation. These examples effectively illustrated the wide application of the one-way principle to varying conditions of traffic volumes and "unusual" street and intersection patterns.

The session was closed with a round-table discussion of "Traffic Engineering Problems in Southern States", led by moderator GEORGE T. PAPAGEORGE.

Traffic Engineering Administration

In addition to the regularly scheduled traffic engineering group sessions, ITE Vice-President WILBUR S. SMITH participated in the General Public Safety Section meeting on Tuesday morning, March 8th. Smith discussed "The Engineering Part in Traffic Administration", steering his remarks from first-hand experience, to the problems faced by public officials in southern communities. He outlined the growing public demand for traffic engineering services and various methods of integrating an engineering program in the traffic safety activities of a community.

ITE Award Winners

Traffic engineering achievement in states and cities was officially recognized for the first time on April 14, 1949 by the Institute of Traffic Engineers. On that date cities and states received word from ITE headquarters that they had won the first annual award for outstanding performance in traffic engineering. The Traffic Engineering Section of the Annual Inventory of Traffic Safety Activities (formerly known as the National Traffic Safety Contest) was the basis for making awards (p. 286, March issue).

States capturing the award for outstanding performance in traffic engineering during 1948, the runner-up, and their respective traffic engineers are:

Eastern Region

First Place: NEW JERSEY—Arnold H. Vey, Traffic Engineer

Second Place: NEW YORK—Robert C. Georger, Director, State Traffic Commission

Midwestern Region

First Place (Tie): MINNESOTA—J. E. P. Darrell, Traffic Engineer; MICHIGAN—J. Carl McMonagle, Director, Planning & Traffic Division

Western Region

First Place: CALIFORNIA—J. C. Young, Traffic Engineer

Second Place: UTAH — Harry S. Wright, Traffic Engineer

No award was made this year in the Southern Region as the result of a recommendation by the Board of Judges to eliminate from consideration all states and cities with less than a 70% rating on the traffic engineering section.

Winning cities for the year 1948 are:

Group I (500,000 pop. and over)

First Place: CLEVELAND, OHIO—Vurnen L. Johnson, Traffic Engineer

Second Place (Tie): DETROIT, MICHIGAN—A. F. Malo, Traffic Engineer; MILWAUKEE, WISCONSIN—Howard F. Ilgner, Traffic Engineer

Group II (200,000-500,000 pop.)

First Place: DALLAS, TEXAS—William C. Brandes, Traffic Engineer

Second Place: ROCHESTER, NEW YORK—R. H. Young, Director, Traffic Control

Group III (100,000-200,000 pop.)

First Place: SOUTH BEND, INDIANA—E. H. Miller, Traffic Engineer

Second Place: HARTFORD, CONNECTICUT—C. H. Upham, Jr., Traffic Engineer

Group IV (50,000-100,000 pop.)

First Place: EVANSTON, ILLINOIS—Z. A. Faulkner, Traffic Engineer

Second Place: FRESNO, CALIFORNIA—Robert D. Dier, Traffic Engineer

Group V (25,000-50,000 pop.)

First Place: BELMONT, MASSACHUSETTS—J. W. Kales, Town Engineer

Second Place: ARLINGTON, MASSACHUSETTS—J. M. Keane, Town Engineer

Group VI (10,000-25,000 pop.)

First Place: WILMETTE, ILLINOIS—Robert Sale, Village Engineer

Second Place: ALBERT LEA, MINNESOTA—F. J. Brince, City Engineer

Plaques will be awarded this month to the winning states and cities which, in the opinion of the judges, reported an engineering program deserving national recognition. Presentations will be made by selected representatives of the Institute.

All 48 states and 578 cities participated in the contest, which covered the calendar year 1948. The National Traffic Safety Contest Committee of Judges served as the award committee for the Institute of Traffic Engineers. Three of the members of this committee are members of the Institute: Thomas H. MacDonald, Commissioner, U. S. Public Roads Administration, Chairman; Norman Damon, Automotive Safety Foundation; and Leslie J. Sorenson, Traffic Engineer. City of Chicago.

SECTION NEWS

Florida Section

The Florida Section held its Annual Meeting on March 8, 1949 at the Thomas Jefferson Hotel in Tampa. Florida.

Members Present:
Earl J. Reeder
Robert N. Grunow
W. M. Parker
Walter E. Ducker
Walter D. Gottschalk
Ted M. Vanderstempel

Members Absent:
Harry Howard, Jr.
John L. Hoover
William H. Folwell
Edmund Friedman

After breakfast was served in the "Stable Room" of the hotel, the meeting was called to order at 8:30 A.M. by President Reeder. In addition to the members, the following fifteen guests were present:

Robert A. Mitchell, Pres., ITE
Harry E. Neal, Vice-Pres., ITE
Wilbur S. Smith, Vice-Pres., ITE
D. Grant Mickle, Director, ITE
Harry Porter, Jr., Director, ITE
Robert S. Holmes, Exec. Secy., ITE
Prof. L. J. Ritter
George T. Papageorge
Charles S. LeCraw
Karl A. Bevins
Richard W. Wilcox

Herman J. Hoose
Arthur M. White
Robert Leopold
H. A. Flanakin

Minutes of the last annual meeting were read and approved, after which President Mitchell of the ITE spoke, representing the ITE and its 450 members. He invited all of those present to attend the annual convention of the ITE to be held in Washington, D. C., next September. He briefly reviewed action taken by the Board at its meeting on March 6.

Bob Holmes, Executive Secretary of the ITE, gave an outline of the work ahead of him in reorganizing "Traffic Engineering", which will be published in different form after October 1, 1949. He indicated that the secretaries of the local sections would act as correspondents for "Traffic Engineering" and thus aid the editor in making the magazine more valuable and interesting.

Earl Reeder read the annual report of the President, followed by Ted Vanderstempel who read the fiscal report for 1948-1949.

Bob Grunow reported on the meeting of the Steering Committee for the third Annual Florida Highway Conference. This Conference will be held May 9th, 10th and 11th.

Professor Ritter of the University of Florida gave an outline of the curriculum of the Highway Engineering Department at the University and emphasized the fact that within a very short time he expects to have included in the curriculum of the University a course in traffic and transportation engineering.

A motion was made by Ted Vanderstempel and seconded by Earl Reeder that the Florida Section of the Institute write a letter to the Board, asking

The above photo was taken at the "biggest" meeting in the history of the Florida Section. From left to right: Harry Porter, Jr., Herman Hoose, Walter Gottschalk, Karl Bevins, Charles LeCraw, Jr.; (front to rear) Arthur White, Professor H. A. Flanakin, L.S.U., (partially hidden), Robert Grunow, Robert Mitchell, Earl Reeder, George Papageorge, Ted Vanderstempel, Richard Wilcox, Bob Holmes, Robert Leopold, Atlanta Traffic Improvement Association, Professor L. J. Ritter, University of Florida; (front to rear) Harry Neal, Wilbur Smith, Walter Ducker, local affiliate, Grant Mickle, and Walter Parker. Smiles were occasioned by the anticipated crash of the photographer, perched precariously on a railing.

them to consider the grade of Senior Member for those members who are Registered engineers in their respective states.

There being no further business at hand, Earl Reeder then called for the election of officers for the year 1949-1950, and relinquished the Chair temporarily to Bob Mitchell.

Robert N. Grunow was elected President, Ted Vanderstempel Vice-President, and Walter Gottschalk, Secretary-Treasurer.

No further business being at hand the meeting was adjourned at 9:45 A.M.

Western Section

The Portland-Salem Area group have been quite active in the last several months. They held a meeting at Berg's Chalet in Portland on January 6. In addition to being the initial organization meeting of the group, the get-together was the occasion of a farewell party for George Howie, who left the following day for Cincinnati to assume the duties of Traffic Engineer of that city. The business portion of the meeting was devoted to a discussion of plans for the Annual Meeting of the section, scheduled for June at Portland, and an outline of the functions of the offices of the state and city traffic engineering departments. There were seven members and twelve guests present at the meeting.

The Portland-Salem Area group held a luncheon meeting in Portland on February 19, at which time there was further discussion about plans and arrangements for the Annual Meeting of the section. Those in attendance included four members and nine guests.

The Southern California Area group held a meeting at the Rodger Young Auditorium on February 3. Mr. Sidney Williams, Assistant to the President, National Safety Council, was the speaker. Ten members and guests were present for the meeting.

Win Carsten, Chairman of the Committee on Parking for the Western Section, has announced the members of his committee. They are Bob Dier, Fred Fowler, Dick Gallagher, George Helliwell and "Lew" Lewarch.

Yale Student Chapter

For its January activity, the student chapter met with the New England Section, ITE to hear an interesting talk on "Expressways in Urban Areas". The February meeting was held in the Faculty Lounge at Strathcona Hall and was highlighted by a showing of films covering design of superhighways in the New York-New England area. The March meeting included an extremely interesting and informative talk on "Publc Speaking" by Inspector L. A. Hince of FBI. April activity centered on a trip to New York City and special tours planned by the Long Island Parkway Commission and the Port of New York Authority. The chapter is planning to conduct the technical session of the May meeting of the New England Section, and also is planning a picnic outing prior to graduation.

Tests Show Autoists Safe From Lightning

Recent tests at the Westinghouse lightning laboratory in Tafford, Pa., should be reassuring to motorists who must drive through severe electrical storms.

Three-million-volt lightning strokes produced by a giant surge generator were fired at a steel-topped automobile while an engineer sat at the wheel. The automobile acted as a lightning-proof cage diverting the heavy currents harmlessly around passengers. Only damage to the car was a small scorched spot on the metal top of the car.

Personalities . . . .

OSCAR GUNDERSON says he hasn't tooted his own horn since he sold his trombone to another corn fed Iowa youngster many moons ago. At least we can verify the fact that he was born and raised in the vicinity of Eagle Grove, Iowa.

Oscar is not certain just what lured him to Ann Arbor for an education, but it seems that in 1938, after a four year struggle, Professor Morrison and the rest of the faculty at Michigan finally threw in the sponge and kicked him out into the cold, cruel world with a B.S. in C.E.

There is some talk that Oscar's early transportation experience was gathered on the railroad as freight handler, crew caller, baggage smasher and section worker. However, the "indoctrination" at Michigan started him on the right track with a brief assignment to the Michigan State Highway Department. Apparently highway traffic engineering proved quite attractive as a career. Oscar plunged into successive traffic engineering position with the City of Flint, the National Safety Council, the Chicago Motor Club, Michigan State Police, and the Traffic Safety Association of Detroit, before landing in his present assignment with ITE "old timer" Joe Wehmeyer.

During World War II, Oscar served as Highway Transportation Officer in Seventh Army headquarters. He claims that during this period he gave birth to "Magnetic Maggie." This *gadget*

(GUNDERSON, *cont'd on page 396)*

T. ELMER TRANSEAU, after graduating from the University of Pennsylvania with a degree in Civil Engineering, entered the employ of the City of Philadelphia in 1913. He served in various capacities in the Bureau of Highways and Bureau of Engineering and Surveys until 1930, at which time the Traffic Engineering Bureau was formed under Burton W. Marsh.

Transeau became Traffic Signal Engineer in the new organization and later was appointed Traffic Engineer. In 1936 he became Assistant Director of Public Safety, in complete charge of traffic. In 1939 he resigned and became Director of the Bureau of Highway Safety of the Commonwealth of Pennsylvania.

In 1941, followng Pearl Harbor, the Governor appointed him State Rationing Administrator. He held this position until the Federal Government was in a position to take over the work in June of 1942. From December 1942, until the end of the war, he cooperated with the Federal Government by acting as State Mileage Administrator.

Transeau is a member of the National Safety Council and a consultant for the Eno Foundation. He is chairman of the Committee on Safety Education of the American Association of Motor Vehicle Administrators and chairman of the Committee on Forms and Statistical Practices of the National Conference on Uniform Traffic

(TRANSEAU, *cont'd on page 396)*

(GUNDERSON, *cont'd from pg. 395)*

was a field-mounted electro-magnet on a 6 x 6 truck which was used for clearing the roads, railheads, and dumps of tire-ruining nails and flak.

Among some of the more important projects with which Oscar has been identified are: research on sleep and driver fatigue in traffic accidents with Stan Baker; driver training, including service as the first instructor at Evanston Township High School and the Chicago Motor Club; the 1939 revision of Michigan Motor Vehicle Law; and various projects dealing with roadside control, such as parking and elimination of fixed objects.

Oscar is reticent to provide details of his pet hobbies, but we understand that his "home movie" craze almost came to an end after returning from North Africa and showing the wife pictures taken in Casablanca's famous Kasbah. He states that unlike some of his beer-consuming ITE friends who empty barrels, he fills them and grows strawberries.

(TRANSEAU, *cont'd from page 395)*

Accident Statistics. He is also a member of the Committee on Accident Records of the President's Highway Safety Conference.

In 1948 Governor Duff appointed him Executive Director and Secretary of the Governor's Highway Safety Advisory Committee. He has been a member of Sigma Tau Engineering Fraternity since 1910 and a member of the *Institute of Traffic Engineers* since 1932.

Transeau disclaims having any hobbies, with the possible exception of touring long distances in the summer and studying city traffic systems. However, he regards this as work even if he does enjoy it, according to his family. He also enjoys reading American history with particular reference to the war between the states but insists that all forms of exercise are harmful, although not urging anyone else to follow his example.

MEMBERSHIP ELECTIONS

MEMBERS
Elected March 6, 1949

CSANYI, LADIS H.
Professor of Civil Engineering
Iowa State College
Ames, Iowa
SEND MAIL:
427 No. Franklin Ave.
Ames, Iowa

JORGENSEN, ROY E.
Deputy Comm. & Chief Engr.
Connecticut State Highway Dept.
State Office Building
Hartford, Connecticut

ROTHROCK, CLAUDE A.
State Planning Engineer
State Road Comm. of W. Va.
315 Professional Building
Charleston 1, West Virginia
SEND MAIL: 2 Sherwood Apts.
Charleston 1, West Virginia

WRIGHT, HARRY S.
Chief Traffic Engineer
Utah State Highway Comm.
State Capitol Building
Salt Lake City, Utah
SEND MAIL: 137 Lincoln Street
Midvale, Utah.

ASSOCIATES

BUCKMAN, THOMAS R.
Traffic Engineer
City of Fort Worth
1000 Throckmorton Street
Fort Worth 2, Texas

CHENOWETH, CECIL E.
District Traffic Engineer
State of Illinois, Div. of Hwys., Distr. 6
126 E. Ash Street
Springfield, Illinois

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- Timing intervals are continuously adjusted by the volume, density, and speed of the traffic itself.

WRITE FOR BULLETIN No. 483

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EASTERN INDUSTRIES INC.
NORWALK CONNECTICUT

GARDNER, LAMAR
Civil Engineer
Street & Parkway Design Div.
Room 555, City Hall
Los Angeles, California

GORDON, NATHAN
Highway Engineer
Public Roads Administration
Washington 25, D. C.

KAEHLE, M. ALFRED
Acting Engr. of Location & Design
Conn. State Hwy. Dept.
165 Capitol Avenue
Hartford, Connecticut
SEND MAIL: 21 Ellsworth Road
West Hartford 7, Conn.

KEENAN, EDMUND T.
Project Engineer
Knappen Tippetts Abbett Engr. Co.
62 West 47th Street
New York, New York
SEND MAIL: 957 East 22nd St.
Brooklyn 10, New York

KLETT, WILLIAM G.
Traffic Control Engineer
Department of Highways
SEND MAIL: 2006 Palace Ave.
St. Paul 5, Minnesota

KNOTT, J. IRVING
Asst. Traffic Engineer
Capital Transit Co.
36th and M Streets, N. W.
Washington 7, D. C.
SEND MAIL: 6407 Medwick Dr.
Hyattsville, Maryland

PEMBERTON, CHARLES A.
Office Engineer
Arizona State Highway Dept.
City Hall
Phoenix, Arizona
SEND MAIL: 3336 W. McDowell Road
Phoenix, Arizona

POW, RAYMOND
Sr. Town Planning Assistant
P. O. Box 44W
Town Hall
Auckland, New Zealand

PRICE, WILLIAM N.
Traffic Civil Engineer
Arizona State Highway Dept.
1701 W. Jackson Street
Phoeniz Arizona
SEND MAIL: 6406 So. 4th Ave.
Phoenix, Arizona

PURSER, GEORGE W.
Traffic Engineer
City & County of San Francisco
City Hall
San Francisco, Calif.
SEND MAIL: 619 20th Avenue
San Francisco 21, California

STUCKEY, ELMO E.
Asst. District Engineer—Traffic
State Hwy. Comm. of Indiana
1517 Catalpa Street
Ft. Wayne, Ind.
SEND MAIL: E. Jackson Street
Monroe, Indiana

JUNIOR

MERRIAM, LUCIUS A.
Supervisor of Records & Analysis
Colorado State Highway Dept.
Traffic Division
1370 Krameria Street
Denver 7, Colorado

TRANSFERS

AFFILIATE TO MEMBER

KRAFT, MERWYN A.

ASSOCIATE TO MEMBER

BUNCH, JOHN H.
CARSTON, WINSTON H.
RICKER, EDMUND R.
WHITE, ARTHUR M.

JUNIOR TO ASSOCIATE

CAMPBELL, BASEL
FISCH, ARNOLD G.
JORDAN, FENTON G., JR.

It is with sincere regret that we announce the loss to Professor Charles J. Tilden and James E. Reading of their wives, who recently passed away. Professor and Mrs. Tilden were in Australia, at the midpoint of their round-the-world tour, at the time of her death. He returned to the States by plane early in May. The Institute extends its deepest sympathy to Charlie Tilden and Jim Reading.

New Parking Rules In Providence

All private vehicle parking on the southerly side of the south roadway of Exchange Place will be banned under the first of a series of minor improvements in that tough traffic area, the new traffic department has announced.

Twelve angle-parking spaces, now metered, will come out, DWIGHT T. MYERS, traffic engineer, announced, in a step similar to the one that recently removed the last of the parking spaces on lower Westminster Street to ease vehicular flow through a bad bottleneck.

Private vehicle parking has been permitted between Arcade Street and Exchange Street. Its effect has been to make virtually useless a supposed bus stop in that area. Removal of the parking will give a 100-foot bus stop long enough to allow two busses at a time to load at the curb—which is where the new department wants all bus loading to be done.

Myers said the present practice of bus loading in front of the Industrial Trust Co. well out into traffic lanes will be stopped when the new loading zone is established.

The removal of meters on Westminster Street below Turks Head seems to have helped a good deal, Myers said police have reported.

Ithaca Plans New Traffic Program

Mayor Bert T. Baker of Ithaca, N. Y., has taken aggressive steps to improve traffic conditions, including: (a) Establishment of additional off-street parking facilities; (b) Rebuilding of the traffic light control system; (c) A survey of traffic conditions by Prof. **TAYLOR D. LEWIS** of Cornell University; and (d) Appointment of a coordinating traffic committee.

Ohio Traffic Legislation

A bill requiring the reporting of traffic accidents on a state wide basis has been submitted in the Ohio legislature. Ohio is one of only three states remaining which does not require the recording of traffic accidents. The bill has the backing of State Traffic Engineer Harry Neal.

Yearbook Changes

WELLER, WILLIAM J.
Executive Assistant
Office of the Mayor
City Hall
Portland, Oregon

RITTGERS, VIRDEN A.
288 Boulevard
New Milford, New Jersey

HARTUNG, BERNARD
Personnel Mgr. & Safety Engr.
Vaughan-Millwork Company
P. O. Box 2390
Reno, Nevada

KIDWELL, EDWARD
Asst. Traffic Engineer
Dept. of Traffic & Transportation
520 Preston Avenue
Houston, Texas

Membership Applications

NEW

ALLEN, ROBERT J.
333 Firth Street
South Plainfield, New Jersey

DERRICK, WILLIAM S.
Division of Highway Planning
#2 Capitol Square
Atlanta 3, Georgia

EASTMAN, RAYE CLAUS
233 Crest Avenue
Ann Arbor, Michigan

FOLWELL, WILLIAM H.
1945 N. W. 24th Street
Miami 35, Florida

KING, KENNETH M.
1232 Lowerline Street
New Orleans 18, Louisiana

LORENTZEN, KAY
Traffic Engineer
Chicago Motor Coach Co.
Chicago, Illinois

QUEENAN, JOSEPH P.
34 Livingston Avenue
Lowell, Masachusetts

TAYLOR, ALONZO CLASON
U. S. Public Roads Administration
c/o U. S. Embassy, APO 736
Postmaster, San Francisco, Calif.

TRANSFER

AVINS, NATHAN
Assistant Electrical Engineer
Engineering Bureau
Police Dept., 400 Broome Street
New York 13, New Yok

DEETZ, RUSSELL S.
1st Asst. Traffic Engineer
Ohio Dept. of Highways
Columbus, Ohio

FAUSTMAN, D. JACKSON
1243 Marian Way
Sacramento, California

GOTTSCHALK, WALTER D.
Traffic Plann. Supervisor
Dept. of Traffic & Transportation
3343 Dinner Key Drive
Miami 33, Florida

HEAD, J. Al
Asst. Traffic Engineer
State Highway Department
P. O. Box 30
Salem, Oregon

SHUTTLEWORTH, GERALD E.
Sales & Engineering
The Hunt Company
3700 W. Six Mile Road
Detroit 21, Michigan

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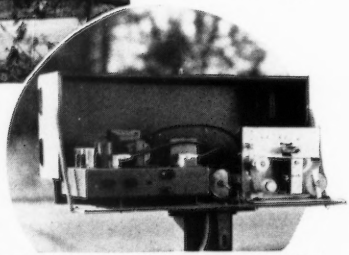
Always	Never
Be	Overtake a
Careful.	Pedestrian
Don't	Quickly.
Enter intersections	Respect
Foolishly.	Safety laws.
Go	Travel
Heedfully	Unusually slow in
Into traffic	Vicious
Jams.	Weather.
Keep the	Xhibit
Law	Your driving
Morally.	Zest cautiously.

by JACK C. NORRED
Draftsman, Ariz. Highway Dept.

NEW PERMANENT STATION TRAFICOUNTER

Below: Counter Open



Here is the improved Permanent Station Traficounter—the latest in the line of Traficounters Streeter-Amet has developed over a period of many years. All highway departments who have relied on Streeter-Amet for help in their traffic problems will appreciate the many advantages of this new Traficounter.

The detection is not affected by any weather—snow or ice. It is designed especially to eliminate rubber tubes or treadles. It detects vehicles at high or low density of traffic.

STREETER-AMET COMPANY
1726 BELLE PLAINE AVENUE
CHICAGO 13, ILLINOIS

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AUTOMATIC WEIGHT RECORDERS SINCE 1888

The New

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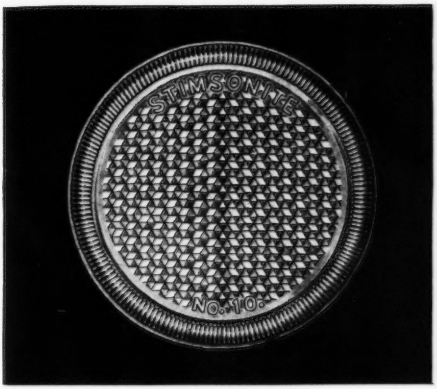

● All plastic, one-piece reflector formed by fusing a Lucite back piece with the well-known Stimsonite Reflector. No metal parts or gaskets. The new Stimsonite Reflector being complete in itself is dust and moisture proof regardless of age, weather or service.

Available in various sizes, shapes and colors for replacement purposes or new local sign manufacture.

1

Complete line of reflectorized traffic devices:

STOP SIGNS AND PANELS
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HIGHWAY DELINEATORS
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Non-luminous traffic and parking signs—STANDARD, SEMI-STANDARD AND SPECIAL

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SIGNAL SERVICE DIVISION

AMERICAN GAS ACCUMULATOR COMPANY

1027 NEWARK AVENUE, ELIZABETH 3, N. J.

OTHER TRAFFIC NEWS

Army News

DRIVER EXAMINATIONS. The Department of the Army recently issued Special Regulations No. 375-505-5, 23 February, 1949 clarifying policies of the U. S. Civil Service Commission and the Army governing qualifications and examinations for issuance of permits to civilian drivers of Army vehicles. Essentially, the Civil Service Commission examinations are designed to provide a basic permit for normal traffic operation (conventional type vehicles, pick-up and delivery service, nontactical operation, and incidental driving in normal over-the-road operation). The Army driver examinations (PRT 565) are *additional* requirements imposed by the Department to determine qualifications for issuance of an unlimited permit to drive a military motor vehicle in various specialized (e. g., tactical) operations.

UNIFORM MANUAL. The Army has approved the revised edition of the Manual on Uniform Traffic Control Devices for use as a guide in the selection, installation, and maintenance of traffic control equipment on installations or other properties under Army jurisdiction. Copies of the Manual have been distributed to various commands in accordance with information contained in Department of the Army Circular, No. 26, 1 March 1949.

Don't forget to order your copy of ANNUAL PROCEEDINGS of the INSTITUTE OF TRAFFIC ENGINEERS priced at $2.00 per copy.

Send your order direct to ITE Headquarters, Strathcona Hall, New Haven 11, Connecticut.

Men vs. Women Drivers

The Division of Traffic and Safety, Ohio Department of Highways, recently issued a bulletin entitled "Women Behind The Wheel", detailing a special study on the accident experience of men and women drivers involved in traffic accidents on the rural state highway system during 1947.

Violation data showed that 57 per cent of the women were reported in violation as compared to 61 per cent of the males. The most frequent violation for men was excessive speed—too fast for conditions or over the legal limit. These speeding violations were reported for 17 per cent of the men and 10 per cent of the women. This data was based on 1,310 motor vehicle collisions on rural highways—one driver a male, the other a female.

Further information relative to reported speeds and drinking-driver incidence was compiled from the record of approximately 28,000 male drivers and 1900 female drivers who were involved in traffic accidents of all types. Speeds in excess of 50 miles per hour were reported by 26 per cent of the males and 17 per cent of the female drivers. The drinking-driver incidence for men was 14 per cent; for women, 4 per cent.

The bulletin stated that the purpose of the study was *not* to determine whether males or females are the safer drivers. Too many variables—the most important of which are the ratio of male to female drivers and the number of miles driven by each sex—enter into the question.

available

SIGN POSTS
ROUTE MARKER POSTS!

PARKING SIGNS
SPEED LIMIT SIGNS
WARNING SIGNS
STREET NAME SIGNS
SPECIAL SIGNS

in

FLAT TYPE either single or double faced. EMBOSSED TYPE NON-REFLECTORIZED and REFLECTORIZED of Scotchlite, glass, or plastic units.

Write for Catalog and Prices

THE HUNT COMPANY

Established 1920

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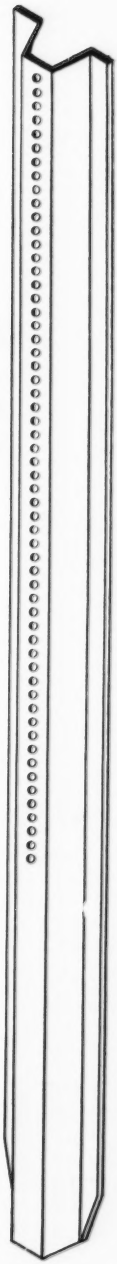
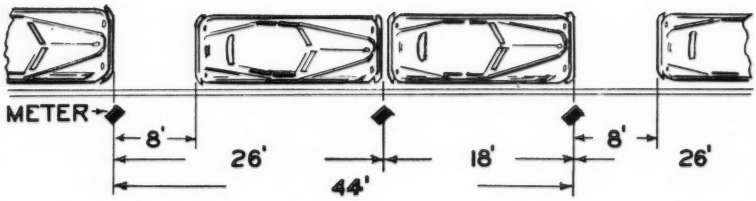


Open Discussion

This sketch illustrates just how the "pair parking" plan (p. 202, January issue) is intended to work. Each pair of parked vehicles takes up 44 feet of curb space, with 8 feet of clearance provided at each end of the "pair zones" for pull-outs. The meters serving each pair of cars are 18 feet apart, while the distance between each pair of meters is 26 feet. Motorists will always act in their own interest by parking with their front bumper exactly opposite the meter.

"PAIR PARKED" CARS
GARY PLAN.



Northwestern Traffic Institute Expands Staff

Francis P. Lowrey, former director of highway safety for the Massachusetts Safety Council, has joined the training staff of the Traffic Institute, Northwestern University.

In making the announcement of Mr. Lowrey's appointment, Franklin M. Kreml, director of the Institute said:

"The Institute's rapidly expanding program of service in the traffic field—embracing training for traffic court judges and prosecutors, military traffic personnel, employees of motor vehicle departments, personnel using chemical tests to determine intoxication, as well as specialized courses for traffic police officers—makes it necessary to increase our staff."

Mr. Lowrey began his career with the Traffic Bureau of the Brookline, Mass., Police Department in 1932. He attended the Institute's traffic police administration course in 1942, and from June, 1944, to July, 1947, served as a field representative of the Traffic Division of the International Association of Chiefs of Police.

While with the IACP Traffic Division, which is closely affiliated with the Institute, Mr. Lowrey worked principally with traffic bureaus of police departments in eastern states, assisting with administrative reorganization of traffic control functions and personnel training.

LOOKING AHEAD

May 19-20—DETROIT, MICHIGAN
Michigan State Safety Conference
Book Cadillac Hotel—Includes two-day course in Traffic Engineering Fundamentals.

JUNE 1-3—WASHINGTON, D. C.
President's Highway Safety Conference
Departmental Auditorium, Federal Works Building—Rudolf F. King, Executive Director, Office of Program Reports, Federal Works Agency, Washington 25, D. C.

JUNE 6-18—NEW YORK CITY
New York University Institute for Traffic Training (first section)
New York University—Dr. Herbert J. Stack, Director, Center for Safety Education, 8 Fifth Avenue, New York 11, N. Y.

JUNE 8—NEW HAVEN, CONN.
Sixth Connecticut Traffic Engineering Conference
Yale University—Prof. Fred W. Hurd, Coordinator, Bureau of Highway Traffic, Strathcona Hall, New Haven 11, Connecticut.

JUNE 9-10—BOULDER, COLORADO
First Colorado Traffic Engineering Conference
University of Colorado—Prof. Warren Raeder, Head, Dept. of Civil and Architectural Engineering, University of Colorado, Boulder, Colorado.

JUNE 16, 17, 18 — JEFFERSON CITY, MISSOURI
Second Missouri Traffic Engineering Conference
Governor Hotel—Leon W. Corder, Senior Maintenance Engineer, State Highway Department, Highway Building, Jefferson City, Missouri.

JUNE 24 and 25—PORTLAND, OREGON
Annual Meeting Western Section, ITE
Bruce Crandall, Traffic Engineer, Oregon State Highway Dept., Salem, Oregon.

JULY 5-22—EVANSTON, ILLINOIS
Northwestern University Institute for Traffic Training
Northwestern University — Traffic Engineering course July 11-15. Frank M. Kreml, Director, Northwestern University Traffic Institute, 1704 Judson Avenue, Evanston, Ill.

JULY—LOS ANGELES, CALIFORNIA
Second California Traffic Engineering Conference
University of California—Joseph E. Havenner, Manager, Public Safety Department, Auto Club of Southern California, 2601 S. Figueroa Street, Los Angeles 54, California.

JULY 13-15—SEATTLE, WASHINGTON
First Washington Traffic Engineering Conference
University of Washington—R. G. Hennes, Prof. of Civil Engineering, University of Washington, Seattle, Washington.

SEPTEMBER 6-16—NEW HAVEN, CONNECTICUT
Yale University Institute for Traffic Training
Yale University—Traffic Engineering course, September 12-16. T. M. Matson, Director, Bureau of Highway Traffic, Strathcona Hall, Yale University, New Haven 11, Conn.

SEPTEMBER 11-15—DALLAS, TEX.
57th Annual Conference, International Association of Chiefs of Police
Baker Hotel—Executive Secretary, IACP, 1424 K Street, N. W., Washington 5, D. C.

SEPTEMBER 18-21—KANSAS CITY, MISSOURI
55th Public Works Congress, American Public Works Association
Municipal Auditorium—Local Chairman John E. Maring, Kansas City, Missouri.

SEPTEMBER 25-28—WASHINGTON, D. C.
20th Annual Meeting, Institute of Traffic Engineers
Wardman Park Hotel—Executive Secretary, Strathcona Hall, New Haven 11, Connecticut.

Poor conditions of cars is reported as a contributing factor in 16% of all fatal traffic accidents. Worn out brakes, inadequate lights and thread-bare tires made up more than half of all reported defects.

150
EAGLE SIGNAL 3 DIAL CONTROLLERS
TO BE INSTALLED IN THE HEART OF
DOWN TOWN LOS ANGELES
PICO
FIGUEROA ST.
CITY LIBRARY
PHILHARMONIC AUDITORIUM
SUBWAY DEPOT
HILL ST.
3RD. ST.
2ND. ST.
TUNNEL
TUNNEL
TUNNEL
TEMPLE ST.
SUNSET BLVD.
HALL OF JUSTICE
CITY HALL
CHURCH OF OUR LADY
OLYMPIC BLVD.
12TH ST.
11TH ST.
9TH ST.
8TH ST.
7TH ST.
BROADWAY
MASTER CONTROLLER TO BE LOCATED IN PERSHING SQUARE
MAIN ST.
LOS ANGELES ST.

.... for today and tomorrow

Los Angeles has actually ordered the equivalent of 3 separate controllers for each intersection. Their controllers will accomplish TRIPLE OFFSET ON EACH DIAL, give them THREE PERCENTAGE SPLITS AT EACH INTERSECTION and TOTAL TIME CYCLE ON EACH DIAL.

When you purchase the Eagle Multidial, you're getting a controller that will handle any traffic situation at any time—and live long enough to do it!

EAGLE OFFERS YOU COMPLETE UNIT CONSTRUCTION

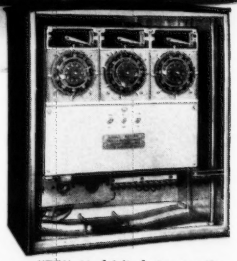
THIS MEANS—All cycle units are independent of one another. Each unit contains its own gear change unit, its own dial, its own impulse contacts and its own EAGLE DISK TYPE SYNCHRONOUS MOTOR.

With one cycle unit remaining in the controller, the other two may be removed for servicing without tools or manipulation of wires. The intersection remains under adequate signal supervision. With separate unit flasher, the entire controller mechanism may be removed and the intersection still remains under the supervision of flashing lights.

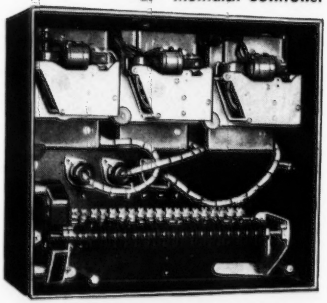
EAGLE Multidial Controllers may be ordered with one, two or three dials—WITH THE FUTURE IN MIND. Complete cycle units and relays may be added at any time, changing the controller to two or three dials at will. Whatever the change in traffic flow at the applied intersection may grow to be, the Eagle Multidial will always be there to adequately control it!

We have designed this controller for your benefit. The choice of dials when ordering, the convenience in maintenance and the flexibility of the controller will pay you big dividends.

Call for Bulletin E 10 which gives complete details of Eagle "EF" Multidial Controller.



"EF" Multidial Controller



"EF" Controller Mechanism

Plan for future growth

Build your next program around the Eagle EF Multidial Controller. Get in contact with your nearest Eagle Signal Sales Representative or write—

EAGLE Signal Corporation

SAFEGUARDING TRAFFIC FOR OVER 20 YEARS

MOLINE - ILLINOIS

ON THE SHELF

American Association of Motor Vehicle Administrators

1948 report of the pedestrian committee. The association, Washington, D. C., 1948. n.p. 6p.

California, Sacramento

Traffic survey of the Sacramento area, 1947-1948. 52p. n.p.

Chicago Park District

Twelfth annual report, 1946. Chicago, Ill., 1948. 103p. n.p. Reports from the six depts. in the park district, including traffic data.

Damon, Norman

Round-up of what's new in traffic safety. Address before first general traffic session of the National Safety Congress. Monday, October 18, 1948. Chicago, Ill., 1948. 26p. n.p. Appendix contains reports from some cities and states, on safety.

League of Wisconsin Municipalities

The urban traffic congestion problem, street widening, expressways, off-street parking. A blunt proposal for solving the municipal traffic problem. Madison, Wisconsin, The League, 1948. mimeo. n.p.

Louisiana. Department of Public Works. Planning Division

Louisiana's proposed coastal highway and why it should be built. Baton Rouge. The department, May 1948. 41p. n.p. A complete story of the proposed highway told with maps and pictures.

Williams, Leslie

Economic analysis and plan of parking facilities for central business district, City of New Rochelle, N. Y. 1948. 91p. n.p.

YOURS FOR THE ASKING.....

A NEW GRANITE CURB FOLDER 7T—Containing complete specifications on fabrication and setting of Standardized Granite Curb, also detail drawing of high speed highway entrances and exits. Every traffic engineer should have it.—Write for your free copy today.

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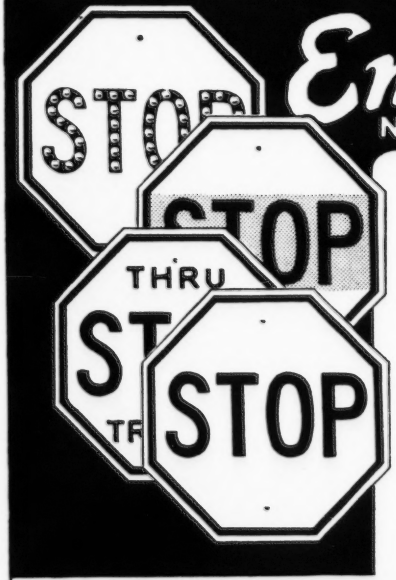

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NOT LESS THAN 0.100"

Cutaway view showing embossing on Miro-Flex Stop Sign.

Good signs that meet the most rigid specifications are a real investment in traffic safety. Choose from Miro-Flex, America's finest complete sign line. Miro-Flex signs are deeply embossed on galvanized, bonderized steel. Finished in baked enamels. Signs in the Miro-Flex line also available with glass or Lucite buttons, or beaded reflectorization. Miro-Flex signs are sturdy, smart looking and definitely dependable . . . easily seen, easily read. For details, write for catalog and quotations on standard or special orders.

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Signal Goes Down But Not Out

City employees in South Boston on a recent Monday afternoon picked up their tools and proudly watched a newly installed signal light at the corner of D Street and Broadway. The signal regularly flashed its rhythmic cycle of red, amber and green.

The following evening, however, hundreds of curious bystanders gathered to watch the same signal, still flashing its constant warning of red, amber and green, but lying prone. Slippery streets and a car out of control had knocked the signal to the ground.

The Sentry of Traffic was down, but with spring mounted reflectors and a sturdy construction, it wasn't out.

—Eagle Signal Corporation

1,150,000 people were killed or injured in auto accidents during 1948. The death rate per million miles of travel dropped from 9.8 in 1946 to 8.1 in 1948 —the lowest on record. A large share of the credit for this remarkable achievement is undoubtedly due to the strong support of the "Stop Accidents" campaigns by newspapers all over America.

Position Wanted

Young Civil Engineer with advanced study in Traffic Engineering and one year of practical experience (Office and Field) in this field desires position of Assistant to City Traffic Engineer. Direct your inquiries to: "Traffic Engineering", 212 Strathcona Hall, New Haven 11, Connecticut.